INTRODUCED: December 15, 2025

AN ORDINANCE No. 2025-273

To authorize the special use of the properties known as 1201 West Franklin Street and 1205 West Franklin Street for the purpose of signage, upon certain terms and conditions.

Patron – Mayor Avula (By Request)

Approved as to form and legality
by the City Attorney

PUBLIC HEARING: JAN 12 2026 AT 6 P.M.

WHEREAS, the owner of the properties known as 1201 West Franklin Street and 1205 West Franklin Street, which are situated in a R-6 Single-Family Attached Residential District, desires to use such properties for the purpose of signage, which use, among other things, is not currently allowed by section 30-506, concerning signs permitted in the R-1, R-2, R-3, R-4, R-5, R-5A, R-6, R-7, and R-8 districts, of the Code of the City of Richmond (2020), as amended; and

WHEREAS, in accordance with section 17.11 of the Charter of the City of Richmond (2020), as amended, it has been made to appear that, if granted subject to the terms and conditions set forth in this ordinance, the special use granted by this ordinance will not be detrimental to the safety, health, morals and general welfare of the community involved, will not tend to create

AYES: _____ NOES: _____ ABSTAIN: _____

ADOPTED: _____ REJECTED: _____ STRICKEN: _____

congestion in streets, roads, alleys and other public ways and places in the area involved, will not create hazards from fire, panic or other dangers, will not tend to overcrowding of land and cause an undue concentration of population, will not adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, and will not interfere with adequate light and air; and

WHEREAS, (i) the City Planning Commission has conducted a public hearing to investigate the circumstances and conditions upon which the Council is empowered to authorize such use, (ii) the City Planning Commission has reported to the Council the results of such public hearing and investigation and its recommendations with respect thereto, and (iii) the Council has conducted a public hearing on this ordinance at which the person in interest and all other persons have had an opportunity to be heard;

NOW, THEREFORE,

THE CITY OF RICHMOND HEREBY ORDAINS:

§ 1. **Finding.** Pursuant to section 30-1050.1 of the Code of the City of Richmond (2020), as amended, the Council hereby finds that the special use set forth in and subject to the terms and conditions of this ordinance will not (i) be detrimental to the safety, health, morals and general welfare of the community involved, (ii) tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, (iii) create hazards from fire, panic or other dangers, (iv) tend to overcrowding of land and cause an undue concentration of population, (v) adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, or (vi) interfere with adequate light and air.

§ 2. **Grant of Special Use Permit.**

(a) Subject to the terms and conditions set forth in this ordinance, the properties known as 1201 West Franklin Street and 1205 West Franklin Street and identified as Tax Parcel Nos. W000-0613/014 and W000-0613/011, respectively, in the 2025 records of the City Assessor, being more particularly shown on a survey entitled "Topographic Survey for a Portion of Parcels W0000531001, W0000613014 & W0000613011, City of Richmond, VA," prepared by Nyfeler Survey, and dated November 16, 2023, and provided as an inset on sheet C2.01 of the plans entitled "St. James's Episcopal Church, Accessible Ramp and Road Improvements Permit Set," prepared by Glavé & Holmes Architecture, and dated May 31, 2024, a copy of which is attached to and made a part of this ordinance, hereinafter referred to as "the Property," is hereby permitted to be used for the purpose of signage, hereinafter referred to as "the Special Use," substantially as shown on the plans entitled "St James's Episcopal Church, Accessible Ramp and Road Improvements Permit Set," prepared by Glavé & Holmes Architecture, and dated May 31, 2024, hereinafter referred to as "the Plans," copies of which are attached to and made a part of this ordinance.

(b) The adoption of this ordinance shall constitute the issuance of a special use permit for the Property. The special use permit shall inure to the benefit of the owner or owners of the fee simple title to the Property as of the date on which this ordinance is adopted and their successors in fee simple title, all of which are hereinafter referred to as "the Owner." The conditions contained in this ordinance shall be binding on the Owner.

§ 3. **Special Terms and Conditions.** This special use permit is conditioned on the following special terms and conditions:

(a) The Special Use of the Property shall be as signage, substantially as shown on the Plans.

(b) No parking shall be required for the Special Use.

(c) The height of the Special Use shall not exceed nine feet, two and three-quarters inches, substantially as shown on the Plans.

(d) All building materials, elevations, and site improvements shall be substantially as shown on the Plans, subject to the issuance of a Certificate of Appropriateness by the Commission of Architectural Review.

(e) All mechanical equipment serving the Property shall be located or screened so as not to be visible from any public right-of-way.

§ 4. **Supplemental Terms and Conditions.** This special use permit is conditioned on the following supplemental terms and conditions:

(a) All required final grading and drainage plans, together with all easements made necessary by such plans, must be approved by the Director of Public Utilities prior to the issuance of the building permit.

(b) Storm or surface water shall not be allowed to accumulate on the land. The Owner, at its sole cost and expense, shall provide and maintain at all times adequate facilities for the drainage of storm or surface water from the Property so as not to adversely affect or damage any other property or public streets and the use thereof.

(c) Facilities for the collection of refuse shall be provided in accordance with the requirements of the Director of Public Works. Such facilities shall be located or screened so as not to be visible from adjacent properties and public streets.

(d) Any encroachments existing, proposed on the Plans or contemplated in the future shall require separate authorization and shall be subject to the applicable provisions of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws.

(e) The Owner shall make improvements within the right-of-way, substantially as shown on Sheet C4.01 of the Plans, which improvements may be completed in one or more phases as approved by the Director of Public Works. All improvements and work within the public right-of-way shall be (i) completed in accordance with the requirements of the Director of Public Works, (ii) considered completed only upon written confirmation by the Director of Public Works or the designee thereof that such improvements and work are in accordance with such requirements, and (iii) transferred to the City, following the written confirmation by the Director of Public Works or the designee thereof, pursuant to a transfer of interest document approved as to form by the City Attorney and accepted by the Chief Administrative Officer or the designee thereof on behalf of the City. The Chief Administrative Officer or the designee thereof, for and on behalf of the City, is hereby authorized to accept, in the manner for which this subsection provides, all improvements and work required by and meeting the requirements of this subsection. The final certificate of occupancy shall not be issued for the Property until all requirements of this subsection are fully satisfied.

(f) In all other respects, the use of the Property shall be in accordance with the applicable underlying zoning regulations.

§ 5. **General Terms and Conditions.** This special use permit is conditioned on the following general terms and conditions:

(a) No permit implementing this special use permit shall be approved until satisfactory evidence has been presented to the Zoning Administrator that any delinquent real estate taxes applicable to the Property have been paid.

(b) The Owner shall be bound by, shall observe and shall comply with all other laws, ordinances, rules and regulations applicable to the Property, except as otherwise expressly provided in this ordinance.

(c) Words and phrases used in this ordinance shall be interpreted to have the meanings ascribed to them by section 30-1220 of the Code of the City of Richmond (2020), as amended, unless the context clearly indicates that a different meaning is intended.

(d) Notwithstanding any other provision of law, this special use permit is being approved due, in part, to the mitigating effects of each and every condition attached hereto; consequently, if any portion of this ordinance is determined to be invalid for any reason by a final, non-appealable order of any Virginia or federal court of competent jurisdiction, the invalidity shall cause the entire ordinance to be void and of no further effect from the effective date of such order.

(e) The privileges granted by this ordinance may be revoked pursuant to the provisions of sections 30-1050.7 through 30-1050.11 of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws. Failure to comply with the terms and conditions of this ordinance shall constitute a violation of section 30-1080 of the Code of the City of Richmond (2020), as amended, and all future amendments to such law, or any other applicable laws or regulations.

(f) When the privileges granted by this ordinance terminate and the special use permit granted hereby becomes null and void, whether as a result of the Owner relinquishing this special use permit in a writing addressed to the Director of Planning and Development Review or otherwise, use of the Property shall be governed thereafter by the zoning regulations prescribed for the district in which the Property is then situated.

§ 6. **Implementation.** The Commissioner of Buildings is authorized to issue a building permit substantially in accordance with the Plans for the Special Use subject to the terms and conditions set forth in this ordinance. An application for the building permit shall be made within 1,096 calendar days following the date on which this ordinance becomes effective. If either the application for the building permit is not made within the time period stated in the previous sentence or the building permit terminates under any provision of the Virginia Statewide Building Code, this ordinance and the special use permit granted hereby shall terminate and become null and void.

§ 7. **Effective Date.** This ordinance shall be in force and effect upon adoption.

City of Richmond

Intracity Correspondence

O&R Transmittal

DATE: October 20, 2025

TO: The Honorable Members of City Council

THROUGH: The Honorable Dr. Danny Avula, Mayor (by request)
(This in no way reflects a recommendation on behalf of the Mayor)

THROUGH: Odie Donald II, Chief Administrative Officer

THROUGH: Sharon L. Ebert, DCAO for Economic Development and Planning

FROM: Kevin J. Vonck, Director of Planning & Development Review

RE: To authorize the special use of the properties known as 1201 and 1205 West Franklin Street for the purpose of signage, upon certain terms and conditions.

ORD. OR RES. No. _____

PURPOSE: The applicant is requesting authorization for additional signage in a R-6 Single-Family Attached Residential District. Underlying feature requirements cannot be met. A Special Use Permit is therefore necessary to proceed with this request.

BACKGROUND: The property is located in the Fan neighborhood on the corner of West Franklin Street and Birch Street. The City's Richmond 300 Master Plan designates a future land use for the subject property as Neighborhood Mixed Use, which is defined as existing or new highly walkable urban neighborhoods that are predominantly residential with a small, but critical, percentage of parcels providing retail, office, personal service, and institutional uses.

Intensity: Building heights are generally two to four stories. Buildings taller than four stories may be found along major streets. Parcels are generally between 1,500 and 5,000 sq. ft.

Primary Uses: Single-family houses, accessory dwelling units, duplexes, small multi-family buildings (typically 3-10 units), and open space.

Secondary Uses: Large multifamily buildings (10+units), retail/office/personal service, institutional, cultural, and government.

COMMUNITY ENGAGEMENT: The Fan District and Historic Monument Avenue Civic Associations were notified of the application; additional community notification will take place after introduction.

STRATEGIC INITIATIVES AND OTHER GOVERNMENTAL: Richmond 300 Master Plan

FISCAL IMPACT: $400 application fee.

DESIRED EFFECTIVE DATE: Upon adoption

REQUESTED INTRODUCTION DATE: December 8, 2025

CITY COUNCIL PUBLIC HEARING DATE: January 12, 2026

REQUESTED AGENDA: Consent

RECOMMENDED COUNCIL COMMITTEE: Planning Commission January 6, 2026

AFFECTED AGENCIES: Office of Chief Administrative Officer

Law Department (for review of draft ordinance)

RELATIONSHIP TO EXISTING ORD. OR RES.: None

ATTACHMENTS: Draft Ordinance, Authorization from Property Owner, Applicant's Report, Plans, Survey

STAFF:

Alyson Oliver, Program and Operations Supervisor, Land Use Administration (Room 511) 646-3709

Shaianna Trump, Planner Associate, Land Use Administration (Room 511) 646-7319

CITY OF RICHMOND, VA
Department of Planning and Development Review
Land Use Administration Division
900 East Broad Street, City Hall - Room 511, Richmond, Virginia 23219

AUTHORIZATION FROM PROPERTY OWNER

TO BE COMPLETED BY THE APPLICANT
Applicant must complete ALL items

HOME/SITE ADDRESS: 1201-1205 W. FRANKLIN ST. **APARTMENT NO/SUITE** _____

APPLICANT'S NAME: EDMUND MCELROY **EMAIL ADDRESS:** [redacted]

BUSINESS NAME (IF APPLICABLE): ST. JAMES'S EPISCOPAL CHURCH

SUBJECT PROPERTY OR PROPERTIES: CHURCH

APPLICATION REQUESTED

- ☐ Plan of Development (New or Amendment)
- ☐ Wireless Plan of Development (New or Amendment)
- ■ Special Use Permit (New or Amendment)
- ☐ Rezoning or Conditional Rezoning
- ■ Certificate of Appropriateness (Conceptual, Administrative Approval, Final)
- ☐ Community Unit Plan (Final, Preliminary, and/or Amendment)
- ☐ Subdivision (Preliminary or Final Plat Correction or Extension)

TO BE COMPLETED BY THE AUTHORIZED OWNER
Owner must complete ALL items

Signing this affidavit acknowledges that you, as the owner or lessee of the property, authorize the above applicant to submit the above selected application/s on your behalf.

PROPERTY OWNER: WILLIAM BAXTER, Junior Warden

PROPERTY OWNER ADDRESS: 1201-1205 W. FRANKLIN ST. RICHMOND, VA, 23220

PROPERTY OWNER EMAIL ADDRESS: [redacted]

PROPERTY OWNER PHONE NUMBER: (804) 317-7318

Property Owner Signature: William H Baxter 8, Junior Warden

The names, addresses, telephone numbers and signatures of all owners of the property are required. Please attach additional sheets as needed. If a legal representative signs for a property owner, please attach an executed power of attorney.

GLAVÉ & HOLMES

architecture
interiors
preservation
planning

January 16, 2025

City of Richmond Department of Planning & Development Review
ATTN: Matthew Ebinger, Planning Supervisor
900 E Broad St.
Richmond, VA 23219

Re: St. James's Episcopal Church Ramp and Road Project
Signage Special Use Permit

Dear Matthew,

On Behalf of St. James's Episcopal Church –

A Special Use Permit is requested for St. James's Episcopal Church at 1205 West Franklin Street, Richmond, VA.

Per Richmond Code of Ordinances ***Section 30-630.9.B*** *"Fences and walls located within required front yards shall not exceed four feet in height."*

St. James's Episcopal Church has received a building permit to construct an ADA accessible ramp for it's aging congregation on the northwest corner of the West Franklin street church entry portico. As a part of this project, a new sign has been designed to replace an existing sign that existed in the footprint of the new ADA ramp. Because of the location of the new ramp, the church signage has moved forward toward West Franklin Street, and is integrated into the masonry ramp wall. At the location of the sign, the height of the wall is approximately 10'-8". At all other ramp wall locations, the masonry wall heights do not exceed the 4' maximum.

The interpretation of the owner and design team is that this is a wall-mounted sign because the signage wall is an extension of the ramp wall which connects to the existing church and is an extension of it. Following the footprint of the ADA ramp, the signage does not pose any additional risks for overcrowding or congestion of the W Franklin Street sidewalk. The height of the masonry wall and the wall mounted signage also do not create any potential hazards from fire or other dangers. The ramp itself increases accessibility to the church, and the signage is integrated into a necessary feature of this ramp. The ramp and signage wall have been delicately designed to support the architectural elements of the historic church through material and form.

If the department does not agree with our interpretation of this being a wall-mounted sign, and instead interprets this as a free-standing signage element, St. James's would like for this application to then be considered as a special use request to permit a free-standing sign, which deviates from the requirements laid out in ***Section 30-506.4*** *for R-6 zoning. "Freestanding sign limitations. Freestanding signs shall not exceed a height of eight feet and shall not be located within five feet of any street line or within 15 feet of any other property line"*

As mentioned above, the height of the designed signage wall is 10'-8". The signage has been designed as an integrated element of the new ADA ramp while also supporting the architectural character of the historic

church. The design team believes this is an appropriate height and scale of signage. Given the proportions and monumentality of the historic church portico, the proposed signage does not obscure or take away from the church's important architectural features (per City of Richmond Urban Design Guidelines, Page 27). The location of the sign was dictated by the new ADA ramp, as described above, therefore moving the signage to a distance of 3'-8" from the property line along W Franklin Street. The signage does, however, still maintain the minimum 5' distance from W Franklin Street.

Signage drawings have been previously provided as a part of the permitting process.

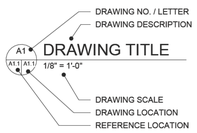
Sincerely,

Daniel Murrow, Project Architect, Glavé & Holmes on behalf of St. James's Episcopal Church

SYMBOLS

REFER TO RESPECTIVE DRAWINGS FOR SYMBOLS NOT INDICATED BELOW.

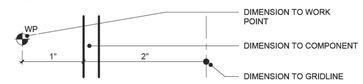
DRAWING TITLE



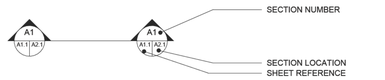
COLUMN GRID



DIMENSIONS



BUILDING SECTION



WALL SECTION



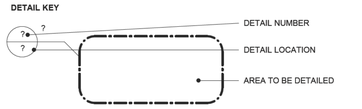
EXTERIOR ELEVATION



INTERIOR ELEVATION



DETAIL KEY



EXT WALL TYPE — A

ELEVATION DATUM — ? ?

PLAN DATUM — 00.00'

CENTERLINE

KEYNOTE — X

DATUM WORKPOINT

NORTH ARROW

REVISION — 7

EQUIPMENT TAG — ?

VICINITY MAP



RICHMOND, VIRGINIA

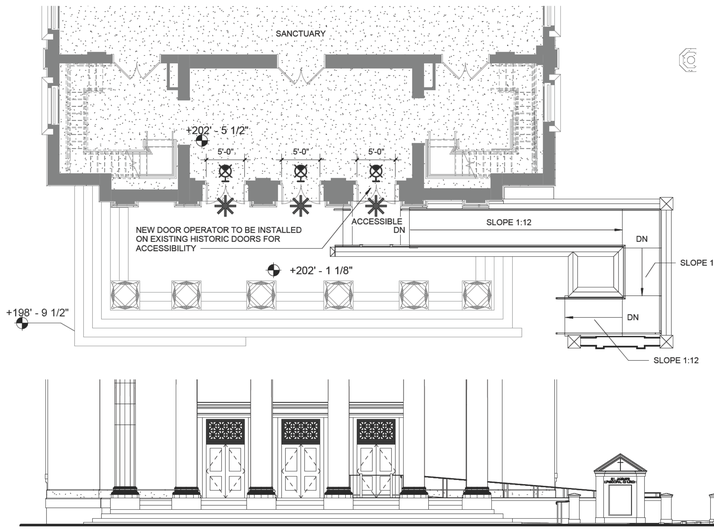
LOCATION MAP



ST. JAMES'S EPISCOPAL CHURCH

ACCESSIBLE RAMP AND ROAD IMPROVEMENTS

PERMIT SET



PROJECT DATA

OWNER / APPLICANT

ST. JAMES'S EPISCOPAL CHURCH
1205 W FRANKLIN STREET
RICHMOND, VIRGINIA 23220

APPLICABLE CODES WITH DATES

2018 EDITION VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC);
PART 1, VIRGINIA CONSTRUCTION CODE (VCC)
PART 2, VIRGINIA EXISTING BUILDING CODE (VEBC)
2017 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
NFPA 70-2017 NATIONAL ELECTRICAL CODE

REQUIRED DOCUMENTS

MAINTAIN A COPY OF THE FOLLOWING DOCUMENTS AT THE SITE:
VCC 2018 AND VEBC 2018

USE GROUPS (SECTION 303)

ASSEMBLY (A-3)

FIRE PROTECTION (SECTION 903)

N/A

CONSTRUCTION TYPE (SECTION 602)

TYPE IIIB

BUILDING HEIGHT AND AREA (SECTION 503)

ALLOWABLE BUILDING HEIGHT AND AREA PER GROUP A-3 (TABLE 503): N/A

BUILDING HEIGHT: N/A

BUILDING AREA PER VUSBC 502 (AREA WITHIN EXTERIOR WALLS): N/A

PLUMBING FIXTURE COUNT (VUSBC TABLE 2902.1): N/A

SUMMARY OF WORK

THE INTENT OF THE WORK IS TO INCREASE THE ACCESSIBILITY OF THE SITE ADJACENT TO ST. JAMES'S EPISCOPAL CHURCH AS WELL AS CREATING ACCESSIBILITY TO THE THE MAIN PORTICO ENTRANCE TO THE CHURCH SANCTUARY. WORK CONSISTS OF DEMOLISHING EXISTING SITE MATERIALS, INCLUDING CONCRETE SIDEWALKS, TREE WELLS, AND OTHER SITE ELEMENTS. TO STRENGTHEN ACCESSIBILITY ON THE SITE, CURB CUTS, AN ELEVATED CROSS WALK AND AN ADA ACCESSIBLE RAMP WILL BE CONSTRUCTED. THE WORK ALSO CONSISTS OF BRICK SITE WALLS AROUND THE ACCESSIBLE RAMP AND UPGRADED SIGNAGE FOR THE CHURCH.

APPLICABLE CODE SECTIONS:

VCC 2018 CHAPTER 10 - MEANS OF EGRESS

VCC 2018 CHAPTER 11 - ACCESSIBILITY

VEBC 2018 CHAPTER 4 - ACCESSIBILITY

404.2 ALTERATIONS

A FACILITY THAT IS ALTERED SHALL COMPLY WITH THE APPLICABLE PROVISIONS IN THIS SECTION AND CHAPTER 11 OF THE VCC, EXCEPT AS MODIFIED BY SECTIONS 404.3 AND 404.4, UNLESS TECHNICALLY INFEASIBLE. WHERE COMPLIANCE WITH THIS SECTION IS TECHNICALLY INFEASIBLE, THE ALTERATION SHALL PROVIDE ACCESS TO THE MAXIMUM EXTENT TECHNICALLY FEASIBLE.

EXCEPTION 2: ACCESSIBLE MEANS OF EGRESS REQUIRED IN CHAPTER 10 OF THE VCC ARE NOT REQUIRED TO BE PROVIDED IN EXISTING FACILITIES.

404.3 ALTERATIONS AFFECTING AN AREA CONTAINING A PRIMARY FUNCTION

WHERE AN ALTERATION AFFECTS THE USABILITY OF OR ACCESS TO AN AREA CONTAINING A PRIMARY FUNCTION, THE ROUTE TO THE PRIMARY FUNCTION AREA SHALL BE ACCESSIBLE. THE ACCESSIBLE ROUTE TO THE PRIMARY FUNCTION AREA SHALL INCLUDE TOILET FACILITIES AND DRINKING FOUNTAINS THAT SHALL ALSO BE ACCESSIBLE TO AND USABLE BY INDIVIDUALS WITH DISABILITIES, SERVING THE AREA OF PRIMARY FUNCTION.

EXCEPTION 4: THE PROVISION DOES NOT APPLY TO ALTERATIONS UNDERTAKEN FOR THE PRIMARY PURPOSE OF INCREASING THE ACCESSIBILITY OF A FACILITY.

HISTORIC DISTRICT COMMISSION OF ARCHITECTURAL REVIEW

ST. JAMES'S EPISCOPAL CHURCH IS LOCATED WITHIN THE MONUMENT AVENUE HISTORIC DISTRICT OF THE CITY OF RICHMOND. THIS WORK WAS REVIEWED BY RICHMOND COMMISSION OF ARCHITECTURAL REVIEW ON 03/26/2024. STAFF RECOMMENDED APPROVAL OF WORK, WITH CONDITIONS.

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C3.12	EROSION & SEDIMENT CONTROL NOTES
C4.01	LAYOUT AND GRADING PLAN
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S1.01	EXISTING BASEMENT AND NEW RAMP PLANS
S2.01	TYPICAL DETAILS
S2.02	RAMP FOUNDATION AND FLOOR SECTIONS

MATERIALS

EARTH

GRAVEL

SAND/MORTAR/GYP

CONCRETE MASONRY

BRICK

CONCRETE

STEEL

ALUMINUM

PVC

ARCHITECTURAL ABBREVIATION LIST

A/C	AIR CONDITIONING
ADJ	ADJACENT, ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APC	ACOUSTIC PANEL CEILING
APPROX	APPROXIMATE
AR	AREA OF REFUGE
ARCH	ARCHITECT(URAL)
ATC	ACOUSTICAL TILE CEILING
AWC	ACOUSTICAL WALL COVERING
AWP	ACOUSTICAL WALL PANEL
BBT	BIOBASED TILE
BD	BOARD
BEJ	BUILDING EXPANSION JOINT
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BRK	BRICK
CAB	CABINET
CEM	CEMENT
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLO	CLOSET
CMU	CONCRETE MASONRY UNIT
CO	CASED OPENING
COL	COLUMN
CONC	CONCRETE
CORR	CORRIDOR, CORRUGATED
CPT	CARPET
CT	CERAMIC TILE
CU FT	CUBIC FEET
DD	DECK DRAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DS	DOWN SPOUT
DWG(S)	DRAWING(S)
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
EMER	EMERGENCY
EPDM	ETHLYENE PROPYLENE DIENE MONOMER
EPX	RESINOUS POURED EPOXY FLOORING
EQ	EQUAL
EQUIP	EQUIPMENT
EVTR	ELEVATOR
EXIST	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FAB	FABRIC
FD	FLOOR DRAIN, FIRE DAMPER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FLR	FLOOR
FP	FIRE PROTECTION
FR	FIRE RESISTANT
FRT	FIRE RETARDENT TREATED
FT	FOOT, FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HC	HOLLOW CORE
HDW	HARDWARE
HDWD	HARDWOOD
HEJ	HORIZONTAL EXPANSION JOINT
HM	HOLLOW METAL
HOR	HORIZONTAL
HT	HEIGHT
HTG	HEATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
ID	INSIDE DIAMETER
INCL	INCLUD(E),(ED),(ING)
INSUL	INSULAT(E),(ED), (ING), (ION)
INT	INTERIOR
JAN	JANITOR
JT	JOINT
KIT	KITCHEN
KO	KNOCK OUT
L	LENGTH
LAB	LABORATORY
LAM	LAMINAT(E), (ED), (ION)
LAV	LAVATORY
LINO	LINOLEUM
LT	LIGHT
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MED	MEDIUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM, MINUTE(S)
MIR	MIRROR
MISC	MISCELLANEOUS
MLDG	MOULDING
MNT	MOUNT
MO	MASONRY OPENING
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
No., #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPNG	OPENING
OPP	OPPOSITE
PERF	PERFORAT(E), (ED), (ION)
PERP	PERPENDICULAR
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL(ED)
PNT(D)	PAINT(ED)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
RAD	RADIUS
RB	RUBBER BASE
RD	ROOF DRAIN
RE:	REFER TO
REF	REFRIGERA(NT), (TOR)
REINF	REINFORC(E), (ED), (ING)
REQD	REQUIRED
RES	RESILIENT
REV	REVISION
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
RSN	RESILIENT STAIR NOSING
RT	RUBBER TILE
S	SOUTH
SC	SEALED CONCRETE
SCF	STRUCTURAL CONCRETE FLOOR
SCHED	SCHEDUL(E), (ED)
SD	STORM DRAIN
SFRM	SPRAY-APPLIED CEMENTITIOUS FIRE RESISTIVE MATERIAL
SIM	SIMILAR
SQ	SQUARE
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
ST	STONE
STD	STANDARD
STL	STEEL
STN	STAIN(ED)
STR	STRUCTURAL
SUSP	SUSPEND(ED)
T	TILE(E), (ING)
T&G	TONGUE & GROOVE
TBD	TO BE DECIDED
TE	TILE EDGING
TEL	TELEPHONE
TERR	TERRAZZO
THK	THICK(NESS)
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TR	TRANSITION
TV	TELEVISION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VEJ	VERTICAL EXPANSION JOINT
VERT	VERTICAL
VIF	VERIFY IN FIELD
VIN	VINYL
W	WEST, WIDE, WIDTH
W/	WITH
W/O	WITHOUT
WC	WALLCOVERING, WATER CLOSET
WD	WOOD
WP	WORKING POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

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PROJECT TITLE

ST JAMES'S RAMP AND ROAD PROJECT

St. James's Episcopal Chuch

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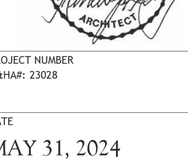
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Dated: September 19, 2024

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PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: CHECKED BY:

REVISIONS

NO	DATE	DESCRIPTION
1	6/26/2024	REV 1 - MATERIAL SPECIFICATIONS
2	7/24/2024	REVISION 2
4	9/05/2024	CITY COMMENTS
5	9/19/2024	City Comments

SHEET TITLE
PROJECT INFORMATION

SHEET NUMBER
T1.01

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Legend

Exist.	Prop.		Exist.	Prop.	
L=43.84'		PROPERTY LINE			CONCRETE
		PROJECT LIMIT LINE			HEAVY DUTY PAVEMENT
		RIGHT-OF-WAY/PROPERTY LINE			BUILDINGS
		EASEMENT			RIPRAP
		BUILDING SETBACK			CONSTRUCTION ENTRANCE
10+00	10+00	BASELINE			
		CONSTRUCTION LAYOUT	27.35 TC×	TC27.35×	TOP OF CURB ELEVATION
		ZONING LINE	26.85 BC×	BC26.85×	BOTTOM OF CURB ELEVATION
A	A	TOWN LINE	26.85 FL×	FL26.85×	FLOW LINE ELEVATION
			26.85 EP×	EP26.85×	EDGE OF PAVEMENT ELEVATION
		LIMIT OF DISTURBANCE	132.75 ×	132.75 ×	SPOT ELEVATION
		WETLAND LINE WITH FLAG	45.0 TW× 38.5 BW	45.0 TW× 38.5 BW×	TOP & BOTTOM OF WALL ELEVATION
		FLOODPLAIN			BORING LOCATION
BLSF	BLSF	BORDERING LAND SUBJECT TO FLOODING			TEST PIT LOCATION
BZ	BZ	WETLAND BUFFER ZONE	MW	MW	MONITORING WELL
RMA	RMA	RMA - RESOURCE MANAGEMENT AREA			
RPA	RPA	RPA - RESOURCE PROTECTION AREA	UD	UD	UNDERDRAIN
			12"D	12"D	DRAINAGE LINE
			6"RD	6"RD	ROOF DRAIN
		GRAVEL ROAD	12"S	12"S	SEWER LINE
EOP	EOP	EDGE OF PAVEMENT	OHW	OHW	OVERHEAD WIRE
MS-3, 3A	MS-3, 3A	ASPHALT CONCRETE CURB AND MEDIAN	6"W	6"W	WATER LINE
CG-2	CG-2	STANDARD 6" CURB	4"FP	4"FP	FIRE PROTECTION LINE
CG-3	CG-3	STANDARD 4" CURB	2"DW	2"DW	DOMESTIC WATER LINE
CG-6	CG-6	COMBINATION 6" CURB & GUTTER	3"G	G	GAS LINE
CG-7	CG-7	COMBINATION 4" CURB & GUTTER	UGE	UGE	UNDERGROUND ELECTRIC
		REVERSE CURB & GUTTER	T	T	TELEPHONE LINE
		FIRE LANE STRIPING	FA	FA	FIRE ALARM
		LIMIT OF CURB TYPE	CATV	CATV	CABLE TV
		SAWCUT			
					DRAIN INLET (VDOT DI-1 OR DI-7)
		BUILDING			DRAIN INLET (VDOT DI-3B)
EN	EN	BUILDING ENTRANCE			DRAIN INLET (VDOT DI-3C)
LD	LD	LOADING DOCK			DRAIN MANHOLE CONCENTRIC
		BOLLARD			DRAIN MANHOLE ECCENTRIC
D	D	DUMPSTER PAD	TD		TRENCH DRAIN
		SIGN	E	E	PLUG OR STUB
		DOUBLE SIGN			FLARED END SECTION
					HEADWALL
		STEEL GUARDRAIL			SEWER MANHOLE CONCENTRIC
		WOOD GUARDRAIL	S		SEWER MANHOLE ECCENTRIC
			SO		SEWER CLEANOUT
		PATH			
		TREE LINE	CS	CS	CURB STOP & BOX
		WIRE FENCE	WV	WV	WATER VALVE & BOX
		FENCE	TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		STOCKADE FENCE			SIAMESE CONNECTION
		CHAIN LINK FENCE	HYD	HYD	FIRE HYDRANT
		STONE WALL	WM	WM	WATER METER
		RETAINING WALL	PIV	PIV	POST INDICATOR VALVE
		STREAM / POND / WATER COURSE	W	W	WATER WELL
		DETENTION BASIN			
		HAY BALES	GG	GG	GAS GATE
		SILT FENCE	GM	GM	GAS METER
4	4	MINOR CONTOUR			ELECTRIC MANHOLE
20	20	MAJOR CONTOUR	EM	EM	ELECTRIC METER
					LIGHT POLE
10	10	PARKING COUNT			TELEPHONE MANHOLE
	210	COMPACT PARKING STALLS	T	T	TRANSFORMER PAD
DYL	DYL	DOUBLE YELLOW LINE			UTILITY POLE
SL	SL	STOP LINE			GUY POLE
		CROSSWALK			GUY WIRE & ANCHOR
		ACCESSIBLE CURB RAMP	HH	HH	HAND HOLE
		HANDICAP PARKING	PB	PB	PULL BOX
VAN	VAN	VAN-ACCESSIBLE HANDICAP PARKING			
Match Line See Sheet C1.01		MATCHLINE			

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJU T
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EXIST	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
DI	DRAIN INLET
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
ES	END SECTION
EW	END WALL
FES	FLARED END SECTION
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
FM	FORCE MAIN
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
PIV	POST INDICATOR VALVE
RCP	REINFORCED CONCRETE PIPE
RIM=	RIM ELEVATION
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

General

1. THE MISS UTILITY LAW REQUIRES FOR THE CONTRACTOR TO CALL 811 AT LEAST 3 WORKING DAYS IN ADVANCE OF THE PLANNED WORK TO ALLOW TIME FOR MARKING, THAT THE MARKS BE RESPECTED AND PROTECTED, AND THAT EXCAVATION BE COMPLETED CAREFULLY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL FOLLOW DETAIL PROVIDED BY VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK FOR SITE SPECIFIC SEEDING MIXTURES IN ACCORDANCE WITH STANDARD & SPECIFICATION 3.32.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
14. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP), GENERAL CONSTRUCTION PERMIT (GCP) PROGRAM AS ADMINISTERED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) UNDER THE JURISDICTION OF THE EPA. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FILE A GCP NOTICE OF INTENT WITH THE DEQ AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE VSMP REGULATIONS.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, TOPSOIL AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. STORM DRAINAGE PIPES SHALL PVC.
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.
11. LOCATION OF FITTINGS SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR SHALL DETERMINE ALL FITTING REQUIREMENTS AND LOCATIONS FROM ACTUAL FIELD CONDITIONS.
12. PIPE LENGTHS SHOWN HEREON ARE FROM CENTERLINE TO CENTERLINE OF STRUCTURE AND ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE ACTUAL PIPE LENGTHS FROM FIELD CONDITIONS.
13. INVERTS CONTROL ELEVATIONS AT ALL STRUCTURES, SLOPES AND LENGTHS ARE APPROXIMATE ONLY.
14. RIM ELEVATIONS SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR SHALL SET ALL STRUCTURES FLUSH WITH FINAL GRADE.

Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURB RADII ARE FIVE FEET TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. CURBING SHALL BE GRANITE WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
7. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
8. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. 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.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY NYFELLER ASSOCIATES, BETWEEN 6/7/2023 AND 11/7/2023. UTILITIES SHOWN ARE FROM FIELD LOCATED EVIDENCE OF SURFACE UTILITIES, CITY OF RICHMOND MAPPING, AND INFRAMAP PAINT MARKINGS.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD88.

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Stone and Brick Material Specifications:

SUBMITTALS

A. PRODUCT DATA
   1. GRANITE FOR DRY-LAID PAVERS
   2. GRANITE FOR WALL CAPS
   3. GRANITE CURB
   4. BRICK PAVERS
   5. POLYMERIC SAND
   6. MORTAR

B. SUBMIT TWO REPRESENTATIVE SAMPLES OF EACH MATERIAL SPECIFIED INDICATING VISUAL CHARACTERISTICS AND FINISH. INCLUDE RANGE SAMPLES IF VARIATION OF FINISH IS ANTICIPATED.
   1. FULL SIZE UNITS OF EACH TYPE OF UNIT PAVER INDICATED.
   2. JOINT MATERIALS AND AVAILABLE COLOR SELECTION.
   3. MORTAR
   4. MATERIAL SAMPLE OF GRANITE WALL CAP

QUALITY ASSURANCE

A. SOURCE LIMITATIONS: OBTAIN PAVER AND WALL CAP STONE FROM ONE SOURCE WITH RESOURCES TO PROVIDE MATERIALS AND PRODUCTS OF CONSISTENT QUALITY IN APPEARANCE AND PHYSICAL PROPERTIES.

B. PAVING MOCK-UP: BUILD MOCK-UP TO VERIFY SELECTIONS MADE UNDER SAMPLE SUBMITTALS AND TO DEMONSTRATE AESTHETIC EFFECTS AND SET QUALITY STANDARDS FOR MATERIALS AND EXECUTION.
   1. CONSTRUCT A TEN (10) FOOT BY TEN (10) FOOT AREA OF EACH UNIT PAVING TYPE FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT, ARCHITECT, AND OWNER. THIS MAY BE AN IN-PLACE MOCKUP THAT IS INCORPORATED INTO THE FINAL PAVING LAYOUT.
   2. INCLUDE GEOTEXTILES, JOINT MATERIAL, AND EDGE TREATMENTS.
   3. CONSTRUCT AS MANY MOCK-UPS AS NECESSARY TO ACHIEVE AN ACCEPTED MOCK-UP.
   4. MOCK-UPS WHICH ARE PARTIALLY CONSTRUCTED OR FINISHED INCORRECTLY WILL BE REJECTED.
   5. REMOVE REJECTED MOCK-UPS IMMEDIATELY FROM THE SITE.
   6. PLACE ACCEPTED SAMPLES IN A LOCATION WHERE SAMPLES CAN BE REFERENCED. APPROVED MOCK-UPS MAY BECOME PART OF THE COMPLETED WORK IF UNDISTURBED AT TIME OF SUBSTANTIAL COMPLETION.
   7. THE ACCEPTED MOCK-UP AREAS WILL BECOME THE PROJECT STANDARD FOR TOLERANCES AND APPEARANCES BY WHICH THE WORK WILL BE JUDGED.

C. DO NOT CHANGE SOURCE OR BRANDS OF UNIT PAVERS, MORTAR, OR JOINT SAND MATERIALS DURING THE COURSE OF THE WORK.

MATERIALS

A. GRANITE:
   1. CONTRACTOR TO MATCH GRANITE OF EXISTING STEP TREADS FOR PAVERS AND WALL CAPS. PROVIDE MULTIPLE OPTIONS FOR A/E REVIEW AS NEEDED TO MATCH THE EXISTING GRANITE TREADS. ONE OF THESE OPTIONS WILL BE SELECTED FOR CONSTRUCTION.
      a) CLAY BRICK PAVERS
         (1) 4"X8"
         (2) COLOR: AUTUMN RED
         (3) FINISH: WIRE CUT
      b) (1) GRANITE CURB
         (1) 6"-8" x 16" DEEP GRANITE CURB SEGMENTS TO MATCH EXISTING GRANITE CURB. ACTUAL SIZE TO BE DETERMINED AFTER MEASURING EXISTING CURB ON-SITE.
         (2) COLOR: TO MATCH EXISTING GRANITE CURB.
         (3) FINISH: TO MATCH EXISTING GRANITE CURB.
         (4) MAY BE FROM DIFFERENT MANUFACTURER THAN PAVERS / CAPS.
      c) GRANITE PAVERS.
         (1) 2.5" THICK.
         (2) COLOR: TO MATCH EXISTING GRANITE STEP TREADS.
         (3) FINISH: TEXTURED NON-SLIP.
         (4) PROVIDE VARIOUS SIZES FROM A SINGLE MANUFACTURER.
         (5) MUST BE FROM SAME MANUFACTURER AS WALL CAP
      d) GRANITE WALL CAPS
         (1) SIZED PER ARCHITECTURAL WALL CAP DETAIL.
         (2) COLOR: TO MATCH EXISTING GRANITE STEPS.
         (3) FINISH: TO MATCH EXISTING GRANITE STEPS.
         (4) PROVIDE VARIOUS SIZES FROM A SINGLE MANUFACTURER.
         (5) MUST BE FROM SAME MANUFACTURER AS GRANITE PAVERS

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ST JAMES'S RAMP AND ROAD PROJECT

St. James's Episcopal Chuch

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COMMONWEALTH OF VIRGINIA
EDWARD L. GLASS
Lic. No. 17564
5/31/2024
PROFESSIONAL ENGINEER

PROJECT NUMBER
G&H#: 23028

DATE
MAY 31, 2024

DRAWN BY: JRD CHECKED BY: ELG

REVISIONS

NO.	DATE	DESCRIPTION
2	7/24/2024	REVISION 2
4	9/5/2024	CITY COMMENTS
5	9/23/2024	CITY COMMENTS
6	9/23/2024	RFI-003
7	9/27/2024	CITY COMMENTS

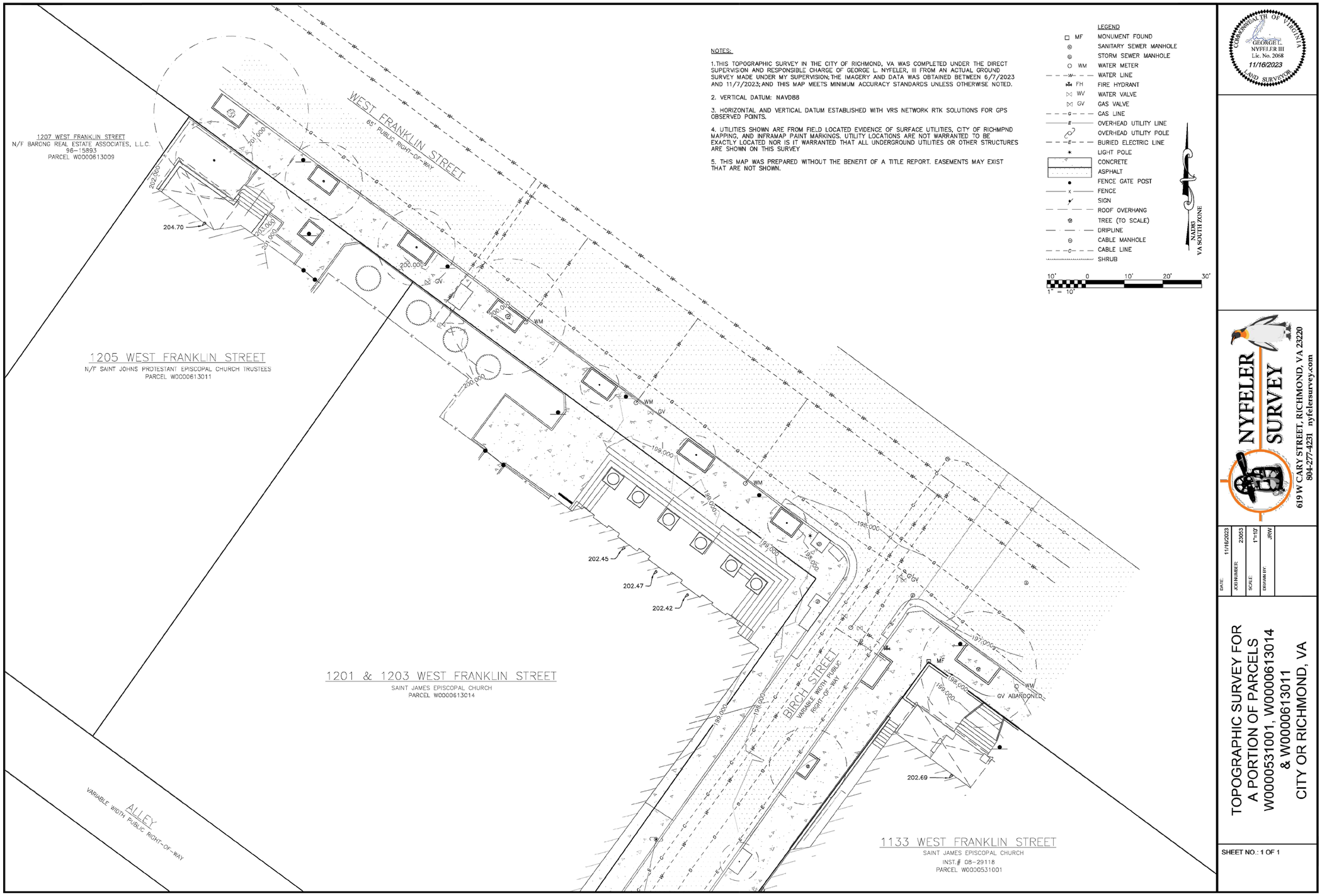
SHEET TITLE
NOTES AND LEGENDS

SHEET NUMBER
C0.01

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NOTES:

1. THIS TOPOGRAPHIC SURVEY IN THE CITY OF RICHMOND, VA WAS COMPLETED UNDER THE DIRECT SUPERVISION AND RESPONSIBLE CHARGE OF GEORGE L. NYFELER, III FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THE IMAGERY AND DATA WAS OBTAINED BETWEEN 6/7/2023 AND 11/7/2023; AND THIS MAP MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. VERTICAL DATUM: NAVD88
3. HORIZONTAL AND VERTICAL DATUM ESTABLISHED WITH VRS NETWORK RTK SOLUTIONS FOR GPS OBSERVED POINTS.
4. UTILITIES SHOWN ARE FROM FIELD LOCATED EVIDENCE OF SURFACE UTILITIES, CITY OF RICHMOND MAPPING, AND INFRAMAP PAINT MARKINGS. UTILITY LOCATIONS ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS SURVEY
5. THIS MAP WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS MAY EXIST THAT ARE NOT SHOWN.

COMMONWEALTH OF VIRGINIA
GEORGE L. NYFELER III
Lic. No. 2068
11/16/2023
LAND SURVEYOR

NYFELER SURVEY
619 W CARY STREET, RICHMOND, VA 23220
804-277-4231 nyfelersurvey.com

DATE:	11/16/2023
JOB NUMBER:	23053
SCALE:	1"=10'
DRAWN BY:	JRW

TOPOGRAPHIC SURVEY FOR
A PORTION OF PARCELS
W0000531001, W0000613014
& W0000613011
CITY OR RICHMOND, VA

SHEET NO.: 1 OF 1

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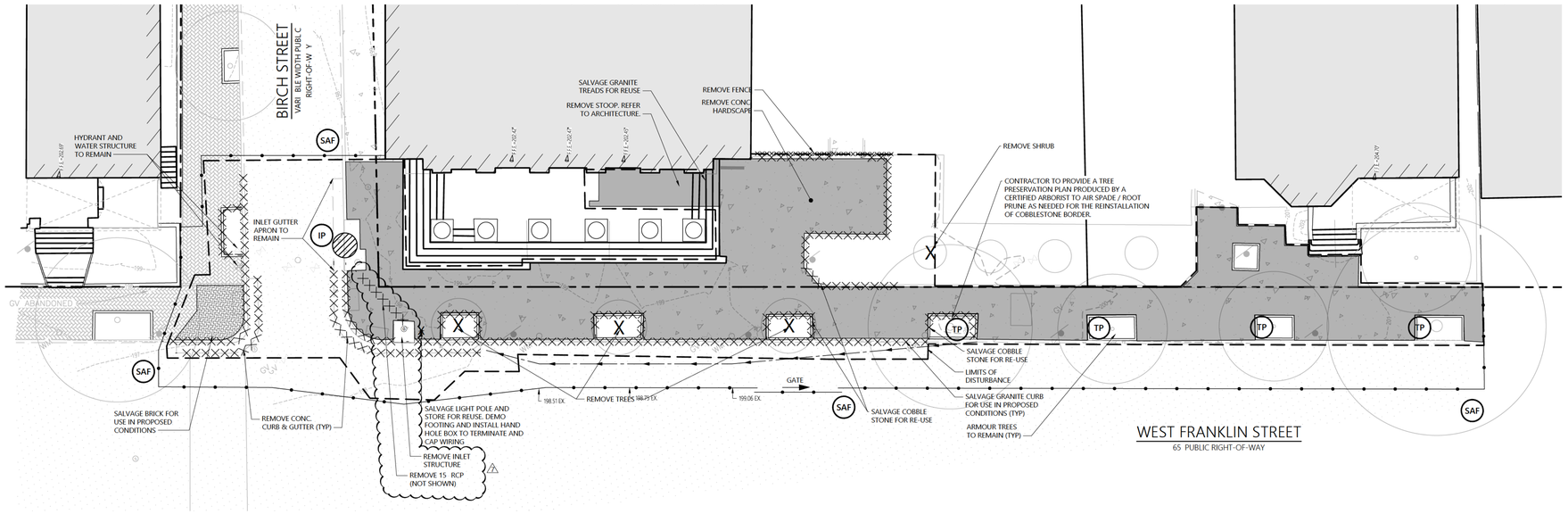
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EXISTING CONDITIONS PLAN

SHEET NUMBER
C2.01

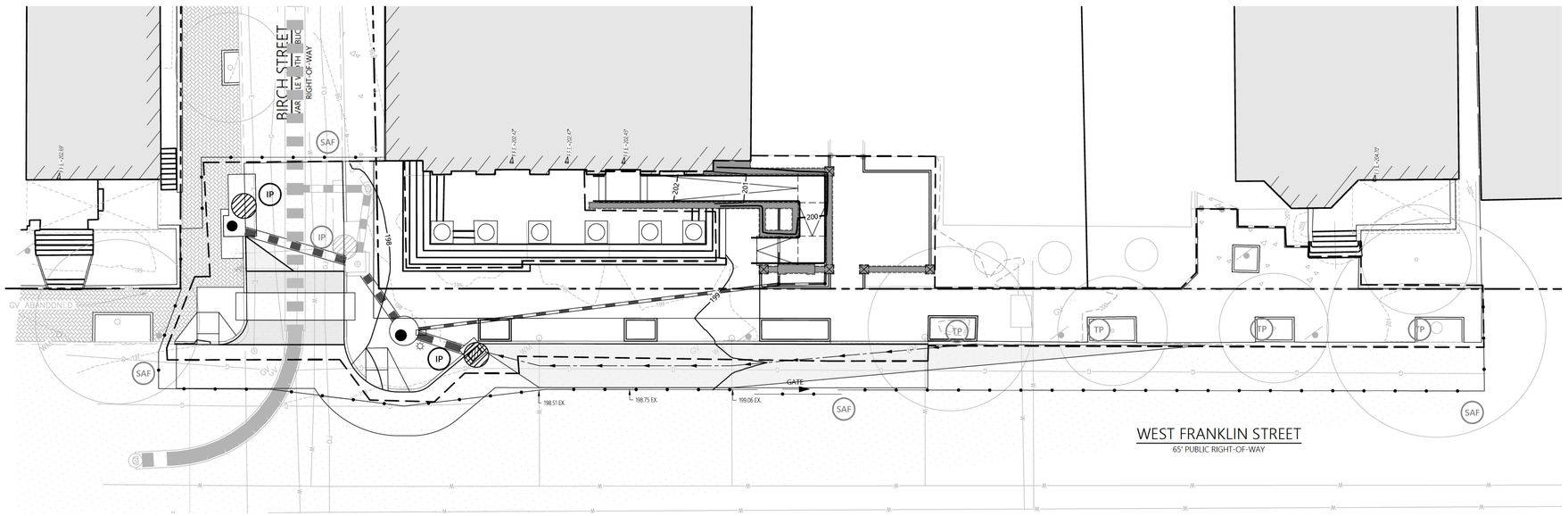
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DEMOLITION AND EROSION & SEDIMENT CONTROL PH1 PLAN



EROSION & SEDIMENT CONTROL PH2 PLAN

Legend

- SAF — SAFETY FENCE
- IP — STORM DRAIN INLET PROTECTION
- TP — TREE PROTECTION
- LIMITS OF DISTURBANCE - 5,580 SF
- XXXX — LINEAR DEMOTION
- X — SPECIALTY DEMOLITION
- HARDSCAPE DEMOLITION

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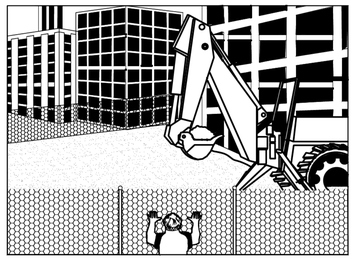
SHEET TITLE
DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER
C3.01

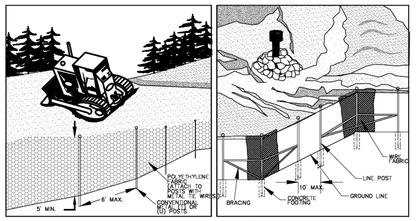
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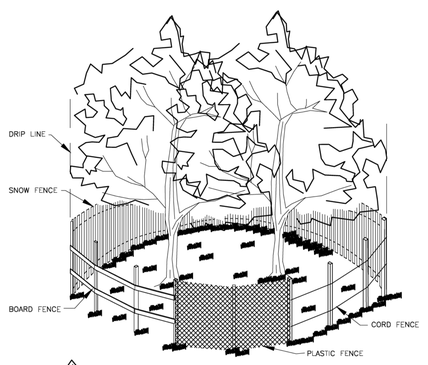
Perspective View



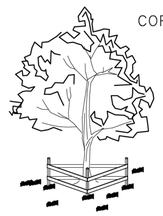
Perspective View Plastic Fence | **Perspective View Metal Fence**

Safety Fence 6/08

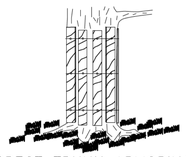
N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.01-1



CORRECT METHODS OF TREE FENCING



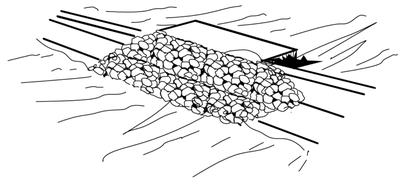
TRIANGULAR BOARD FENCE

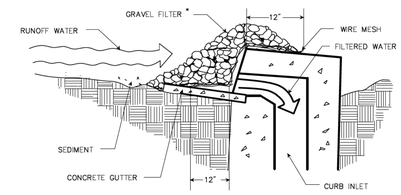


CORRECT TRUNK ARMORING

Fencing and Armoring 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.38.2





Specific Application

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR 5 COARSE AGGREGATE.

Gravel Curb Inlet Sediment Filter 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.07-6

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SHEET TITLE
EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER
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9VAC25-840-40 MINIMUM STANDARDS (EFFECTIVE 11/17/16)

A VESCP MUST BE CONSISTENT WITH THE FOLLOW NG CRITERIA, TECHNIQUES AND METHODS:

1. PERMANENT OR TEMPORARY SO L STAB LIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STAB LIZATION SHALL BE APPLIED WITH N SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT W LL REMA N DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STAB LIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STAB LIZED OR PROTECTED WITH SED MENT TRAPP NG MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND W LL INHIBIT EROSION.
4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A F IRST STEP IN ANY LAND DISTURB NG ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
5. STAB LIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
   a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRA NAGE AREAS LESS THAN THREE ACRES.
   b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SED MENT BASIN. THE M NIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTA N THE STRUCTURAL INTEGRITY OF THE BAS N DUR NG A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SED MENT BAS N IS UTILIZED.
7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT W LL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY W THIN ONE YEAR OF PERMANENT STAB LIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR F IL SLOPES UNLESS CONTAINED WITH N AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
10. ALL STORM SEWER NLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SED MENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BE NG FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR P PES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED N BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO M N MUZE ENCROACHMENT, CONTROL SED MENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROV DED.
14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQU REMENTS PERTAIN NG TO WORKING IN OR CROSS NG LIVE WATERCOURSES SHALL BE MET.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
   a. NO MORE THAN 500 L NEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPH LL SIDE OF TRENCHES.
   c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SED MENT TRAPP NG DEVICE, OR BOTH, AND DISCHARGED N A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
   d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   e. RESTABILIZATION SHALL BE ACCOMPLISHED N ACCORDANCE WITH THIS CHAPTER.
   f. APPLICABLE SAFETY REQU REMENTS SHALL BE COMPL ED WITH.
17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACK NG ONTO THE PAVED SURFACE. WHERE SED MENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVEL NG OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIV DUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITH N 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SO L AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SED MENTATION.
19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SED MENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS.
   a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, P PE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR P PE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR P PE SYSTEM SHALL BE PERFORMED.
   b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:

(1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRA NAGE AREA TO THE PO NT OF ANALYSIS WITH N THE CHANNEL IS 100 TIMES GREATER THAN THE CONTRIBUTING DRA NAGE AREA OF THE PROJECT IN QUESTION; OR

(2) (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VER FY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.

(b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER W LL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND

(c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE P PE OR SYSTEM.

   c. F EXIST NG NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:

(1) IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS; OR

(2) IMPROVE THE PIPE OR P PE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTA NED WITHIN THE APPURTENANCES;

(3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS NTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR

(4) PROV DE A COMB NATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.

   d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE MPROVEMENTS.
   e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXIST NG WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
   f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTA N APPROVAL FROM THE VESCP OF A PLAN FOR MA NTENANCE OF THE DETENTION FACILIT ES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUI REMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORM NG THE MAINTENANCE.
   g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISS PATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILIT ES AS NECESSARY TO PROVIDE A STAB LIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
   h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
   i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
   j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIV DUAL LOTS OR PARCELS IN A RES DENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONS DERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A S NGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENG NEERING CALCULATIONS.
   k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH M N MIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL NTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
   l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROV DES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUI REMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (i) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (ii) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM, AND (iii) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10 YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACH EVED THROUGH MUL TIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS N A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQU REMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15-54 OR 62.1-44.15-65 OF THE ACT.
   m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQU REMENTS OF § 62.1-44.15-52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQU REMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15-24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (i) ARE N ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-870-47 OR GRANDFATHERING N 9VAC25-870-48 OF THE VIRG NIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15-52 A OF THE ACT SHALL APPLY, OR (II) ARE EXEMPT PURSUANT TO § 62.1-44.15-34 C 7 OF THE ACT.
   n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT N 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

STATUTORY AUTHORITY

§ 62.1-44.15-52 OF THE CODE OF V RG NIA.

HISTORICAL NOTES

FORMER 9VAC50-30-40, DERIVED FROM VR625-02-00 § 4; EFF. SEPTEMBER 13, 1990, AMENDED, VIRGINIA REGISTER VOLUME 11, ISSUE 11, EFF. MARCH 22, 1995; VOLUME 29, ISSUE 4, EFF. NOVEMBER 21, 2012, AMENDED AND RENUMBERED, VIRGINIA REGISTER VOLUME 30, ISSUE 2, EFF. OCTOBER 23, 2013; AMENDED, VIRGINIA REGISTER VOLUME 31, ISSUE 24, EFF. AUGUST 26, 2015, VOLUME 33, ISSUE 4, EFF. NOVEMBER 17, 2016.

TEMPORARY SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSO L THREE NCHES DEEP OVER ADVERSE SO L CONDITIONS, F AVAILABLE.
2. RIP THE ENT RE AREA TO SIX NCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UN FORM.
4. APPLY AGRICULTURAL L ME, FERTILIZER AND SUPERPHOSPHATE UN FORMLY AND MIX WITH SOIL (SEE ADMIXTURE BELOW).
5. CONTINUE TILLAGE UNT L A WELL-PULVERIZED, F RM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX NCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULT PACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEED NG AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, F POSSIBLE. F STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIG NAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT S&EC ENV RONMENTAL ENG NEERS ON MAINTENANCE TREATMENT AND FERT LIZATION AFTER PERMANENT COVER IS ESTABLISHED.

PERMANENT SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSO L 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONED, IF AVAILABLE.
2. RIP THE ENT RE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UN FORM.
4. APPLY ALL AGRICULTURAL LIME, FERT LIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SO L (SEE TABLES 3.32-B & 3.32-D THIS SHEET).
5. CONTINUE TILLAGE UNT L A WELL PULVERIZED, FIRM, REASONABLY UNIFORM 4 TO 6 NCHES DEEP SEEDBED IS PREPARED.
6. SEED ON A FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY WITH SEEDING EQU PMENT OR CULT PACK AFTER SEED NG.
7. MULCH IMMEDIATELY AFTER SEED NG AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESENDING WITH N THE PLANTING SEASON, F POSSIBLE. F STAND SHOULD BE OVER 60% DAMAGED , REESTABLISH FOLLOWING ORIG NAL LIME, FERT LIZER AND SEEDING RATES.
9. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESENDING WITH N THE PLANTING SEASON, IF POSS BLE. IF STAND SHOULD BE OVER 50% DAMAGED , REESTABLISH FOLLOWING ORIG NAL LIME, FERT LIZER AND SEEDING RATES AND LANDSCAP NG PLANS.
10. SEE LANDSCAP NG PLANS FOR ADDITIONAL PERMANENT SEED NG, MULCH NG, AND FERT LIZING RATES. ALL AREAS NOT DESIGNATED TO RECEIVE PLANTS SHALL BE SEEDED PER THE LANDSCAP NG PLANS.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF CONSTRUCTION OF AN ACCESSIBLE RAMP INTO THE EXISTING BUILDING AND A SPEED TABLE CROSSWALK ON THE FRONT OF THE BUILDING. THE EXISTING CONCRETE WALK WILL CONVERT TO GRANITE AND BRICK. THE DISTURBED AREA IS 5,400 SQ. FT.

EXISTING SITE CONDITIONS

THE EXISTING SITE CONSISTS OF A MIXTURE OF CONCRETE AND ASPHALT WITH TREE WELLS THROUGHOUT.

SOILS

PER WEB SOIL SURVEY, THE SITE CONSIST OF TYPE 37B TURBEVILLE-URBAN LAND COMPLEX, 2%-6% SLOPES. HYDROLOGIC SOIL GROUP IS B.

ADJACENT PROPERTY

THE PROPERTY'S FRONT W. FRANKLIN ST. TO THE NORTHEAST AND BIRCH ST. TO THE SOUTHEAST. THE SOUTHWEST IS AN ALLEY AND THE NORTHWEST NEIGHBORS OTHER EXISTING BUILDINGS.

OFF-SITE AREAS

NO OFF-SITE AREAS ARE INCLUDED WITHIN THE SCOPE OF THIS PROJECT. REMOVAL OF EXCAVATION AND SPOIL MATERIAL, OR IMPORT OF MATERIAL, TO, OR FROM, OFF-SITE FACILITIES ARE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR TO VERIFY ANY OFF-SITE FACILITY HAS AN ACTIVE LAND DISTURBANCE PERMIT.

CRITICAL AREAS

THERE ARE NO CRITICAL AREAS, WATERS, OR WETLANDS ON-SITE.

STORMWATER RUNOFF CONSIDERATIONS

REFER TO 'COMBINED SEWER SYSTEM'

COMBINED SEWER SYSTEM

IMPERIOUS AND PERVIOUS AREAS ARE EQUAL IN BOTH PRE-DEVELOPMENT AND POST-DEVELOPMENT CONDITIONS.

MANAGEMENT STRATEGIES

1. SITE MUST BE STABILIZED AT THE END OF EACH DAY.
2. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED UNTIL THEY ARE NO LONGER REQUIRED TO COMPLY WITH THE CONTRACT DOCUMENTS OR STATE LAW.
3. CONTRACTOR SHALL INSPECT DAILY AND CLEAN-UP ANY SEDIMENTS TRACKED OUTSIDE THE LIMITS OF DISTURBANCE IMMEDIATELY.

PERMANENT STABILIZATION

POST CONSTRUCTION, THE ENTIRE SITE WILL BE PERMANENTLY STABILIZED USING HARDSCAPE AND LANDSCAPING.

STRUCTURAL PRACTICES

3.01 SAFETY FENCE:

1. SAFETY FENCE SHALL BE CHECKED REGULARLY FOR WEATHER-RELATED OR OTHER DAMAGE. ANY NECESSARY REPAIRS MUST BE MADE IMMEDIATELY.
2. CARE SHOULD BE TAKEN TO SECURE ALL ACCESS POINTS (GATES) AT THE END OF EACH WORKING DAY. ALL LOCKING DEVICES MUST BE REPAIRED OR REPLACED AS NECESSARY.

3.07 STORM DRAIN INLET PROTECTION :

1. INSPECT STRUCTURE AFTER EACH RUNOFF-PRODUCING STORM EVENT AND REPAIR AS NECESSARY.
2. REMOVE SEDIMENT AND RESTORE TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 OF THE ORIGINAL DEPTH OF INLET PROTECTION. DEPOSIT SEDIMENT IN SUITABLE AREA AND STABILIZE.
3. REMOVE STRUCTURE AND STABILIZE FORMER LOCATION WHEN DRAINAGE AREA IS PERMANENTLY AND PROPERLY STABILIZED.

3.38 TREE PROTECTION :

THE FOLLOWING MAINTENANCE GUIDELINES SHOULD BE FOLLOWED IF DAMAGE TO PROTECTED TREES OR TREE PROTECTION FENCING IS DAMAGED.

A. IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1 FT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENED.

B. THE FOLLOWING REPAIR METHODS SHALL BE USED :

1. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
2. WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
3. DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOP-SOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
4. TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENED BARK BACK INTO THE UNDAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND (PLATE 3.38-8).
5. ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION (PLATE 3.38-8).
6. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.

C. THE FOLLOWING FERTILIZATION METHODS SHALL BE USED:

1. BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
2. TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
3. FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS (SEE PLATE3.38-9). IN NO CASE SHOULD IT BE APPLIED CLOSER THAN 3 FT TO THE TRUNK.
4. FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
5. FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUILDLINES GIVEN IN TABLE 3.38-A.
6. MAINTAIN A GROUND COVER OF ORGANIC MULCH AROUND TREES THAT IS ADEQUATE TO PREVENT EROSION, PROTECT ROOTS AND HOLD WATER.

SEQUENCE OF CONSTRUCTION

1. SCHEDULE PRE-CONSTRUCTION CONFERENCE WITH ENGINEER AND ENVIRONMENTAL INSPECTOR AT LEAST 72 HOURS BEFORE BEGINNING CONSTRUCTION.
2. INSTALL CHAINLINK PERIMETER SAFETY FENCE WITH GATES AS SHOWN. SFETY FENCE WITH WEIGHTED ANCHORS IS PREFERRED FOR HARDSCAPE SURFACES. INSTALL SIGNAGE TO ROUTE PEDESTRIANS AROUND SITE.
3. INSTALL INLET PROTECTION AS SHOWN.
4. INSTALL TREE PROTECTION AND ARMOUR AS SHOWN.
5. AFTER EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE, AND WITH PERMISSION OF THE INSPECTOR, BEGIN SITE DEMOLITION.
6. BEGIN SITE CONSTRUCTION.
7. ENSURE ALL RUNOFF FROM SITE IS DIRECTED TO AN EROSION AND SEDIMENT CONTROL DEVICE DOWNSTREAM.
8. PREVENT SEDIMENT CONTAMINATION OF THE STORM DRAIN SYSTEM. INSTALL ADDITIONAL E&SC MEASURES AS NEEDED.
9. ONCE CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED, AND ONLY WITH THE APPROVAL OF THE ENVIRONMENTAL INSPECTOR, REMOVE E&SC MEASURES. STABILIZE E&SC MEASURE AREAS AS NEEDED.

CITY OF RICHMOND STANDARD EROSION & SEDIMENT CONTROL NOTES

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
2. EXCESS EXCAVATION DISPOSED OF OFF THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
3. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP OF THE LAND DISTURBING ACTIVITY.
4. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED SO THAT THE SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.
5. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.
6. PROPERTIES ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.
7. THE DISPOSAL OF WASTE MATERIALS REMOVED FROM EROSION AND SEDIMENT CONTROL FACILITIES AND THE DISPOSAL OF THESE FACILITIES SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
8. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
9. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

GENERAL EROSION AND SEDIMENT CONTROL NOTES (FROM VAESCH TABLE 6-1)

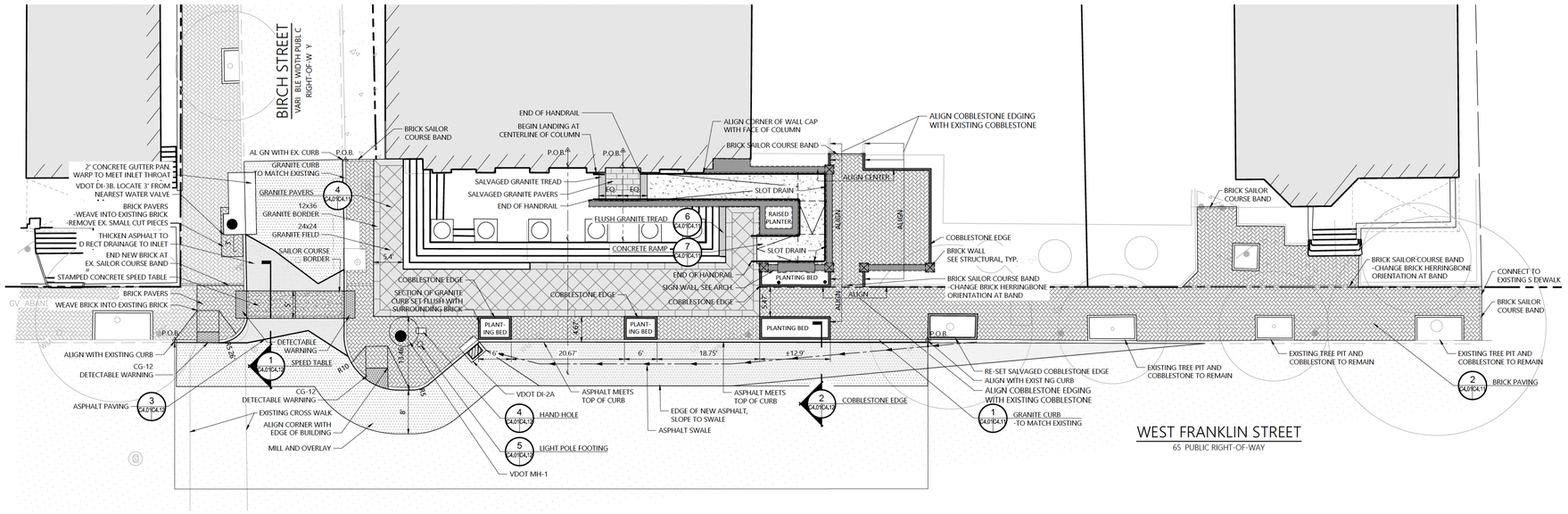
ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-840.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE



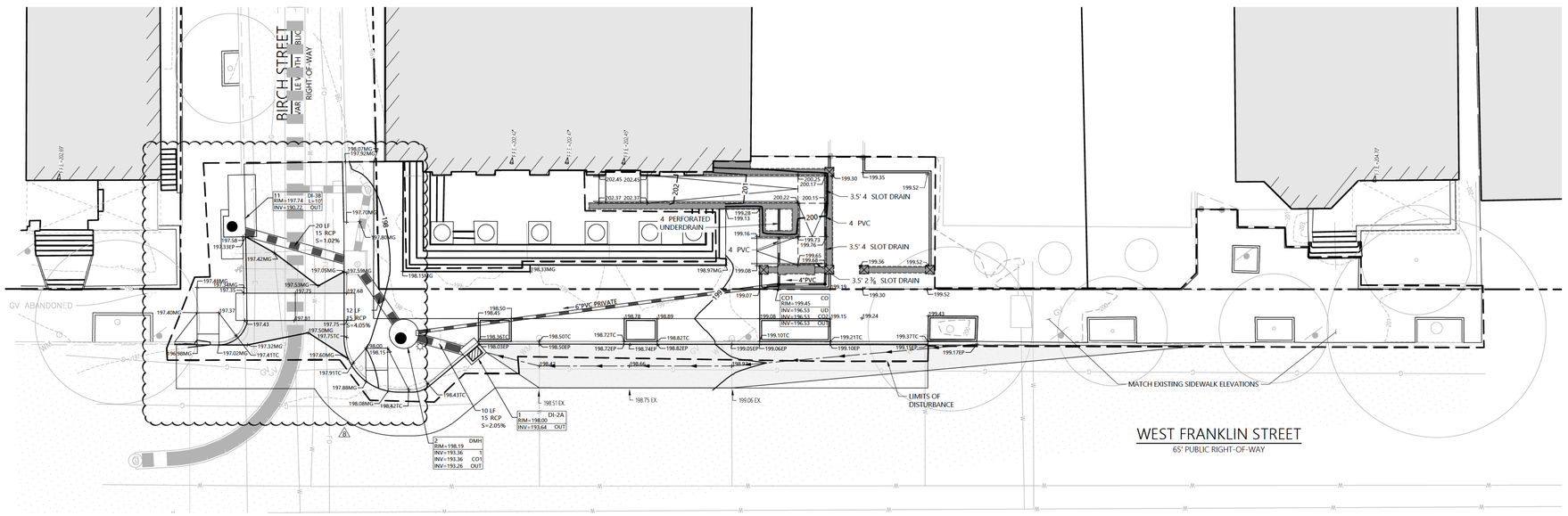
LAYOUT AND MATERIALS PLAN

0 5 10 20 Feet

Legend

RIGHT-OF-WAY/PROPERTY LINE
MINOR CONTOUR
MAJOR CONTOUR
ADA RAMP
DRAINAGE LINE
CONC PAVEMENT
NORMAL PAVEMENT
BRICK PAVERS
GRANITE PAVERS
MILL & OVERLAY ASPHALT
GRAY DETECTABLE WARNING PAVERS

NOTE:
PERFORATED UNDERDRAIN TO BE SURROUNDED WITH 4 OF WASHED #57 STONE ON ALL SIDES THEN WRAPPED IN NONWOVEN FILTER FABRIC



GRADING AND DRAINAGE PLAN

0 5 10 20 Feet

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W glaveandholmes.com

PROJECT TITLE

ST JAMES'S RAMP AND ROAD PROJECT

St. James's Episcopal Chuch

1205 W Franklin Street
Richmond VA 23220

CONSULTANTS

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By Taylor & Parrish
Dated: November 11, 2024
RFI#06

SEAL

COMMONWEALTH OF VIRGINIA
EDWARD L. GLASS
Lic. No. 17564
5/31/2024
PROFESSIONAL ENGINEER

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: JRD CHECKED BY: ELG

REVISIONS

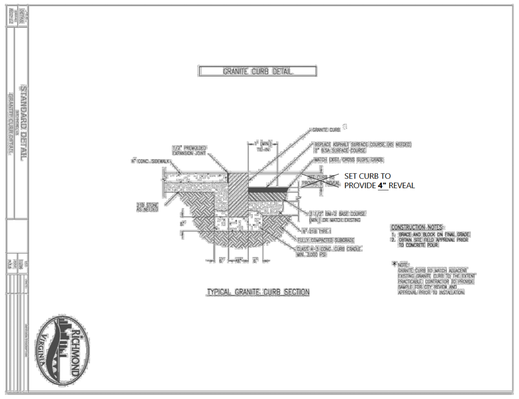
NO.	DATE	DESCRIPTION
4	9/5/2024	CITY COMMENTS
5	9/23/2024	CITY COMMENTS
6	9/23/2024	RFI-003
7	9/27/2024	CITY COMMENTS
8	11/8/2024	RFI-006 GRADES CONFLICT

SHEET TITLE
LAYOUT AND GRADING PLAN

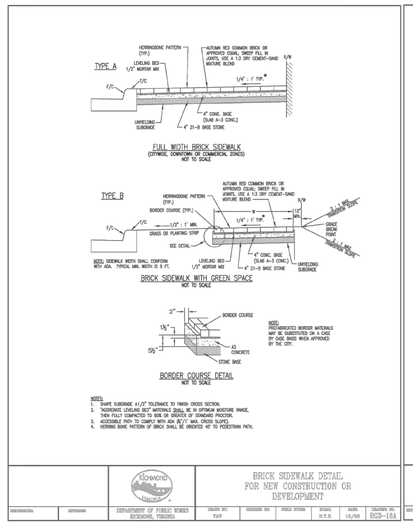
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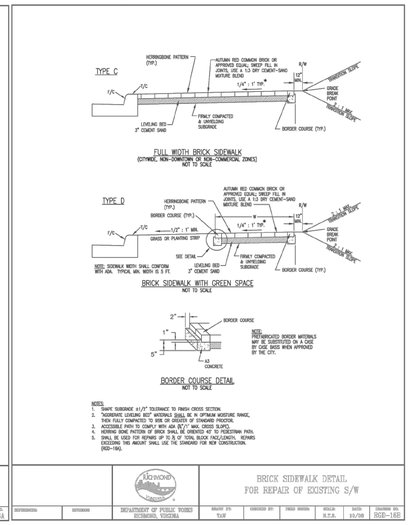
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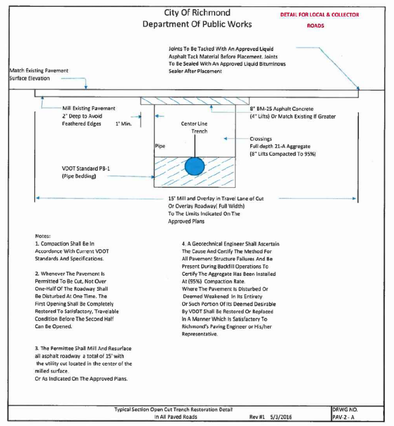
1 GRANITE CURB DETAIL
NTS



2 BRICK SIDEWALK
NTS

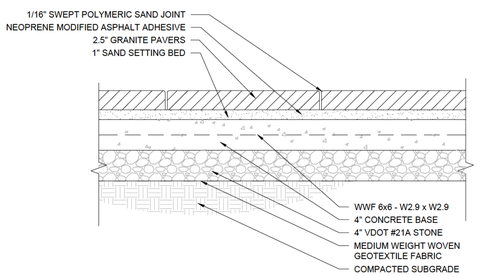


3 TRENCH RESTORATION DETAIL
NTS



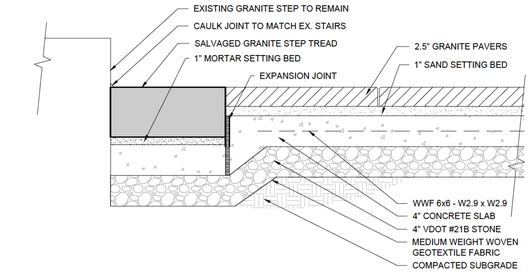
VDOT DETAIL REFERENCE

2016 ROAD AND BRIDGE STANDARDS
1. DI-2A

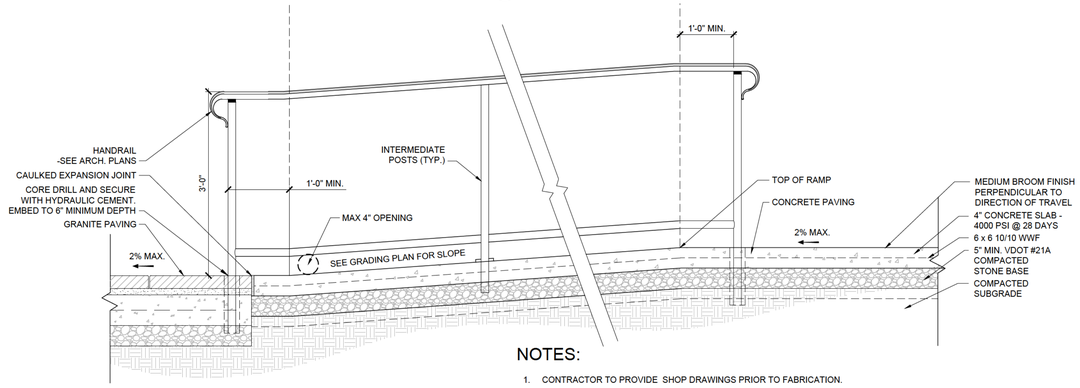


4 GRANITE PAVERS
1 1/2" = 1'-0"

REMOVED FROM SET



6 FLUSH GRANITE TREAD
1 1/2" = 1'-0"

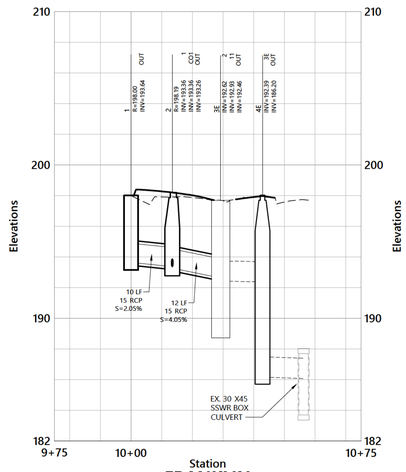


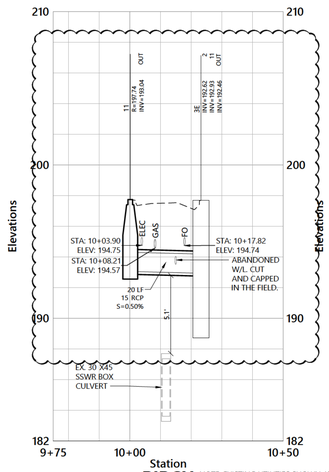
5 BRICK RAMP
1 1/2" = 1'-0"

NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS PRIOR TO FABRICATION.
2. CONTRACTOR RESPONSIBLE FOR CODE COMPLIANT HANDRA LS.
3. FULLY WELD ALL JOINTS. DO NOT LEAVE OPENINGS IN JOINTS WHERE RUST MAY DEVELOP.
4. ALL WELDS ARE TO BE GROUND SMOOTH.
5. LENGTHS OF RAMP RUNS VARY. SEE PLAN.
6. RAMP RUNS NOT TO EXCEED A VERTICAL RISE OF 30".
7. HANDRAILS AND GUARDS SHALL BE DESIGNED TO RESIST A LINEAR LOAD OF 50 POUNDS PER LINEAR FOOT IN ACCORDANCE WITH SECTION 4.5.1 OF ASCE.
8. CONCENTRATED LOAD OF HANDRAILS AND GUARDS SHALL ALSO BE DESIGNED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS IN ACCORDANCE WITH SECTION 4.5.1 OF ASCE.

7 CONCRETE RAMP
1" = 1'-0"





Vert. 0 2 4 8 Feet
Horiz. 0 10 20 40 Feet

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PROJECT TITLE

ST JAMES'S RAMP AND ROAD PROJECT

St. James's Episcopal Chuch

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RFI#07

SEAL

COMMONWEALTH OF VIRGINIA
EDWARD L. GLASS
Lic. No. 17564
5/31/2024
PROFESSIONAL ENGINEER

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: JRD CHECKED BY: ELG

REVISIONS

NO.	DATE	DESCRIPTION
4	9/5/2024	CITY COMMENTS
5	9/23/2024	CITY COMMENTS
6	9/23/2024	RFI-003
7	9/27/2024	CITY COMMENTS
8	11/8/2024	RFI-006 GRADES CONFLICT

SHEET TITLE
SITE DETAILS

SHEET NUMBER
C4.11

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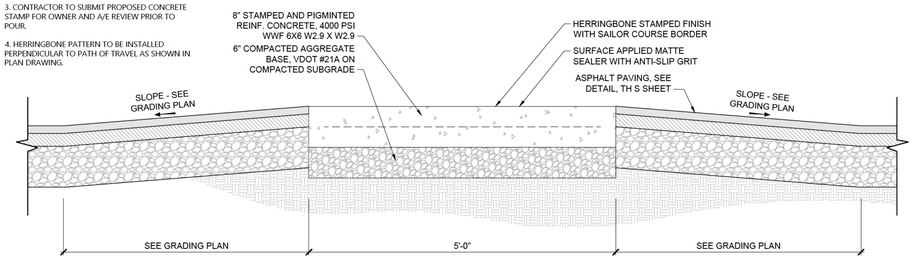
\\vhb.com\gbl\proj\Richmond\35027.00 Glave_StJamesEpiscopal\cad\d\Planset\35027-LM.dwg

NOTES:
1. SPEED TABLE CONCRETE TO BE PIGMENTED BRICK RED TO MATCH PROPOSED BRICK PAVER. PIGMENT SHALL BE MANUFACTURED BY SOLOMON COLORS OR APPROVED ALTERNATIVE AND INCORPORATED INTO CONCRETE MIX PER MANUFACTURER'S SPECIFICATIONS.

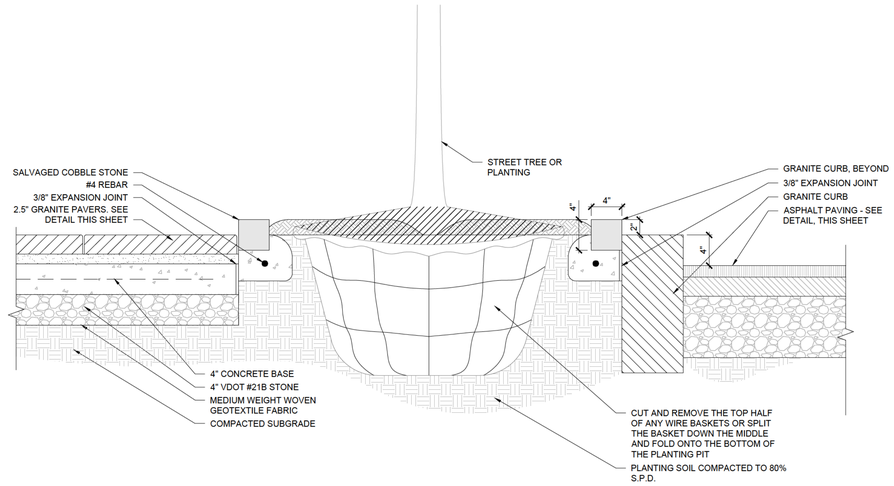
2. CONTRACTOR SHALL SUBMIT PIGMENTED CONCRETE SAMPLE WITH BRICK SAMPLE FOR OWNER AND A/E REVIEW PRIOR TO POUR.

3. CONTRACTOR TO SUBMIT PROPOSED CONCRETE STAMP FOR OWNER AND A/E REVIEW PRIOR TO POUR.

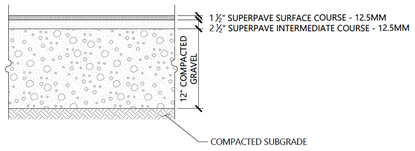
4. HERRINGBONE PATTERN TO BE INSTALLED PERPENDICULAR TO PATH OF TRAVEL AS SHOWN IN PLAN DRAWING.



1 STAMPED CONCRETE SPEED TABLE
1" = 1'-0"



2 COBBLESTONE EDGE
1 1/2" = 1'-0"



HEAVY DUTY FLEXIBLE PAVEMENT

2016 VDOT ROAD AND BRIDGE STANDARD DETAILS
REFER TO THE CURRENT REVISION OF THE STANDARDS FOR THE FOLLOWING:

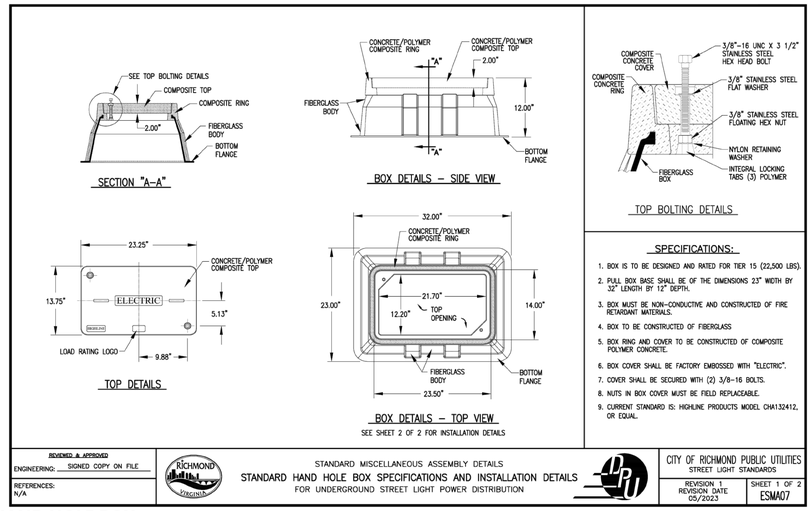
1. DI-2A, PG. 104.03-104.04
2. DI-3B, PG. 104.09-104.10
3. ST-1, PG. 106.09
4. CG-12, PG. 204.01-204.05

STANDARD DUTY FLEXIBLE PAVEMENT

NOTES

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

3 ASPHALT PAVNG
N.T.S. Source: VHB 6/23 LD_430



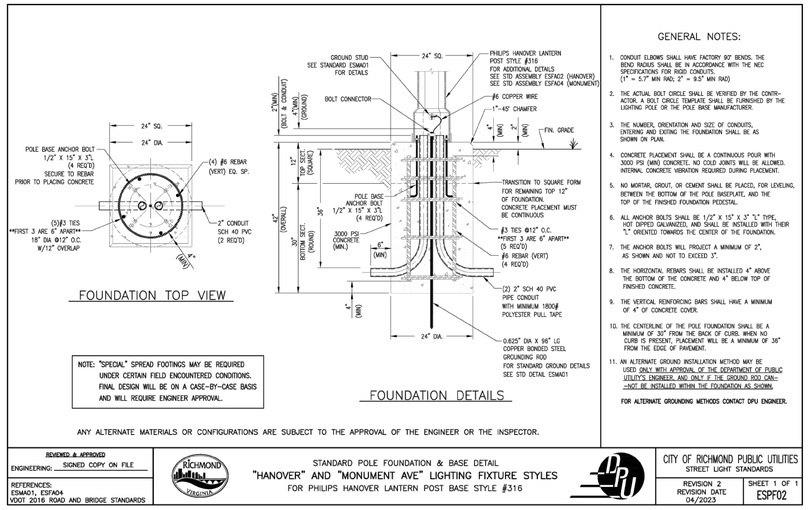
SPECIFICATIONS:
1. BOX IS TO BE DESIGNED AND RATED FOR TIER 15 (22,500 LBS).
2. PULL BOX BASE SHALL BE OF THE DIMENSIONS 23" WIDTH BY 32" LENGTH BY 12" DEPTH.
3. BOX MUST BE NON-CONDUCTIVE AND CONSTRUCTED OF FIRE RETARDANT MATERIALS.
4. BOX TO BE CONSTRUCTED OF FIBERGLASS
5. BOX RING AND COVER TO BE CONSTRUCTED OF COMPOSITE POLYMER CONCRETE.
6. BOX COVER SHALL BE FACTORY EMBOSSED WITH "ELECTRIC".
7. COVER SHALL BE SECURED WITH (2) 3/8-16 BOLTS.
8. NUTS IN BOX COVER MUST BE FIELD REPLACEABLE.
9. CURRENT STANDARD IS: HIGHLINE PRODUCTS MODEL CHA132412, OR EQUAL.

REVIEWED & APPROVED
ENGINEERING: SIGNED COPY ON FILE
REFERENCES: N/A

STANDARD MISCELLANEOUS ASSEMBLY DETAILS
STANDARD HAND HOLE BOX SPECIFICATIONS AND INSTALLATION DETAILS
FOR UNDERGROUND STREET LIGHT POWER DISTRIBUTION

CITY OF RICHMOND PUBLIC UTILITIES
STREET LIGHT STANDARDS
REVISION 1 REVISION DATE 05/2023
SHEET 1 OF 2
ESMA07

4 HAND HOLE BOX
NTS



NOTE: "SPECIAL" SPREAD FOOTINGS MAY BE REQUIRED UNDER CERTAIN FIELD ENCOUNTERED CONDITIONS. FINAL DESIGN WILL BE ON A CASE-BY-CASE BASIS AND WILL REQUIRE ENGINEER APPROVAL.

GENERAL NOTES:
1. CONDUIT ELBOWS SHALL HAVE FACTORY 90° BENDS. THE BEND RADIUS SHALL BE IN ACCORDANCE WITH THE NEC SPECIFICATIONS FOR RIGID CONDUITS. (1" = 5.7" MIN RAD; 2" = 9.5" MIN RAD)
2. THE ACTUAL BOLT CIRCLE SHALL BE VERIFIED BY THE CONTRACTOR. A BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY THE LIGHTING POLE OR THE POLE BASE MANUFACTURER.
3. THE NUMBER, ORIENTATION AND SIZE OF CONDUITS, ENTERING AND EXITING THE FOUNDATION SHALL BE AS SHOWN ON PLAN.
4. CONCRETE PLACEMENT SHALL BE A CONTINUOUS POUR WITH 3000 PSI (MIN) CONCRETE. NO COLD JOINTS WILL BE ALLOWED. INTERNAL CONCRETE VIBRATION REQUIRED DURING PLACEMENT.
5. NO MORTAR, GROUT, OR CEMENT SHALL BE PLACED, FOR LEVELING, BETWEEN THE BOTTOM OF THE POLE BASEPLATE, AND THE TOP OF THE FINISHED FOUNDATION PEDESTAL.
6. ALL ANCHOR BOLTS SHALL BE 1/2" X 15" X 3" "L" TYPE, HOT DIPPED GALVANIZED, AND SHALL BE INSTALLED WITH THEIR "L" ORIENTED TOWARDS THE CENTER OF THE FOUNDATION.
7. THE ANCHOR BOLTS WILL PROJECT A MINIMUM OF 2", AS SHOWN AND NOT TO EXCEED 3".
8. THE HORIZONTAL REBARS SHALL BE INSTALLED 4" ABOVE THE BOTTOM OF THE CONCRETE AND 4" BELOW TOP OF FINISHED CONCRETE.
9. THE VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM OF 4" OF CONCRETE COVER.
10. THE CENTERLINE OF THE POLE FOUNDATION SHALL BE A MINIMUM OF 30" FROM THE BACK OF CURB. WHEN NO CURB IS PRESENT, PLACEMENT WILL BE A MINIMUM OF 36" FROM THE EDGE OF PAVEMENT.
11. AN ALTERNATE GROUND INSTALLATION METHOD MAY BE USED ONLY WITH APPROVAL OF THE DEPARTMENT OF PUBLIC UTILITY'S ENGINEER AND ONLY IF THE GROUND ROD CAN-=NOT BE INSTALLED WITHIN THE FOUNDATION AS SHOWN.

FOR ALTERNATE GROUNDING METHODS CONTACT DPU ENGINEER.

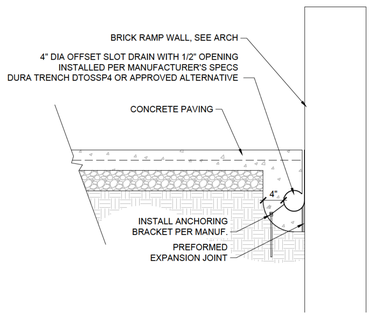
ANY ALTERNATE MATERIALS OR CONFIGURATIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER OR THE INSPECTOR.

REVIEWED & APPROVED
ENGINEERING: SIGNED COPY ON FILE
REFERENCES: ESMA01, ESFA04, VDOT 2016 ROAD AND BRIDGE STANDARDS

STANDARD POLE FOUNDATION & BASE DETAIL
"HANOVER" AND "MONUMENT AVE" LIGHTING FIXTURE STYLES
FOR PHILIPS HANOVER LANTERN POST BASE STYLE #316

CITY OF RICHMOND PUBLIC UTILITIES
STREET LIGHT STANDARDS
REVISION 2 REVISION DATE 04/2023
SHEET 1 OF 1
ESPF02

5 LIGHT POLE FOOTING
NTS



6 SLOT DRAIN
1" = 1'-0"

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COMMONWEALTH OF VIRGINIA
05/31/2024
DAVID C. GERSTENMAIER
No. 271
LANDSCAPE ARCHITECT

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: JRD CHECKED BY: ELG

REVISIONS

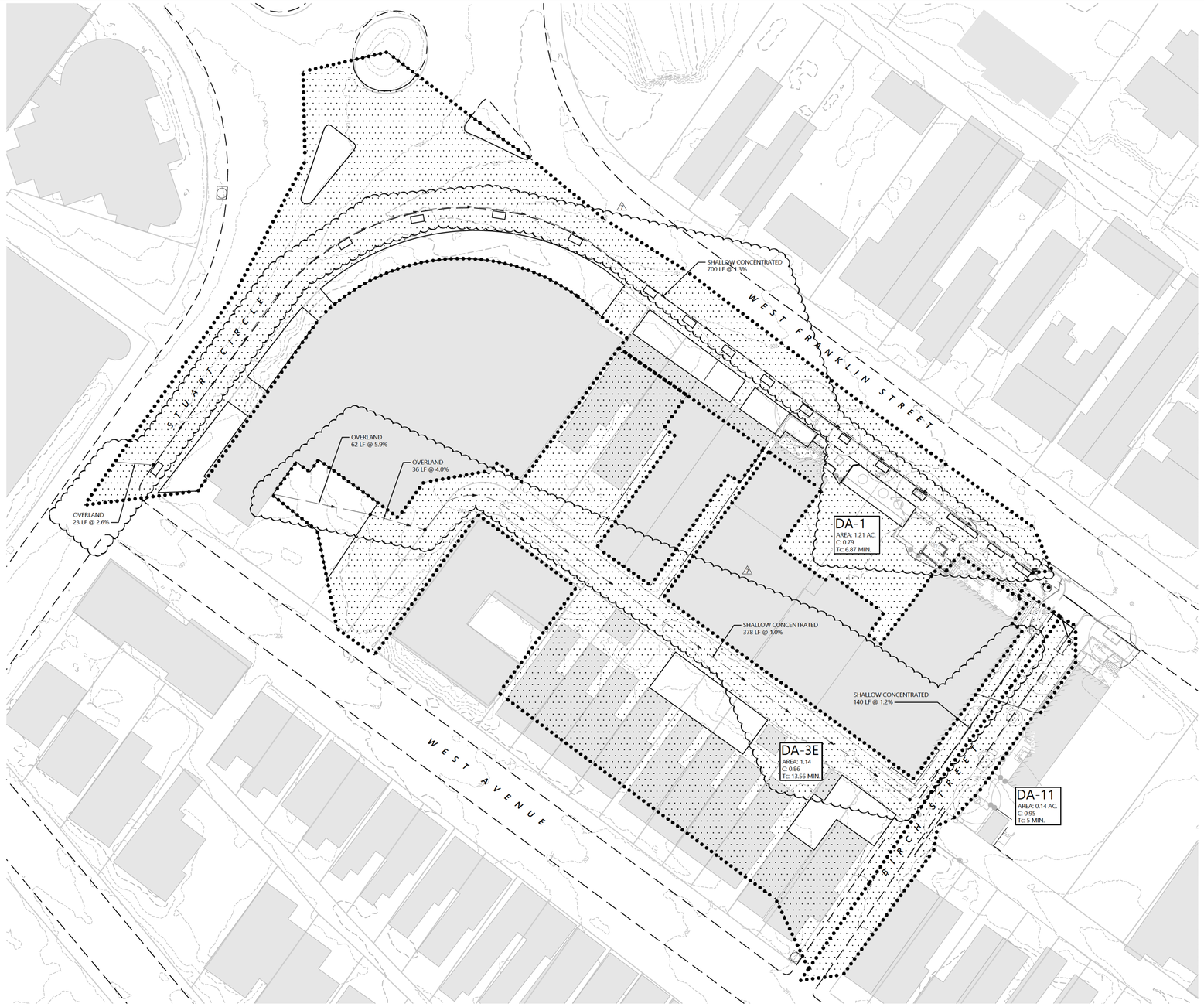
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4	9/5/2024	CITY COMMENTS
5	9/23/2024	CITY COMMENTS
6	9/23/2024	RFI-003
7	9/27/2024	CITY COMMENTS

SHEET TITLE
SITE DETAILS

SHEET NUMBER
C4.12

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Narrative

A VDOT DI-3A IS THE EXISTING PRIMARY CATCHMENT FOR THE SOUTH SIDE OF W. FRANKLIN ST. PROPOSED INLET #1 REPLACES THE DI-3A WITH A DI-2A TO INCREASE THE TOTAL DRAINAGE OPENING FROM 1.15 SQ. FT. TO 3.08 SQ. FT. RESPECTIVELY. THE CONSTRUCTION OF A SPEED TABLE ACROSS BIRCH ST. BLOCKS THE FLOW OF WATER ON THE EAST SIDE OF BIRCH ST. PROPOSED INLET #11 IS A DI-3B PLACED TO CAPTURE THE WATER AND DISCHARGES TO THE EXISTING TRAP INLET ON THE WEST SIDE OF BIRCH ST.

Legend

- BUILDING FOOTPRINT
- IMPERVIOUS GROUND COVER
- PERVIOUS GROUND COVER
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- EDGE OF PAVEMENT

Curb Inlet Length Calculation

Project Description	
Solve For	Curb Opening Length
Input Data	
Discharge	0.93 cfs
Slope	0.012 ft/ft
Gutter Width	2.00 ft
Gutter Cross Slope	0.083 ft/ft
Road Cross Slope	0.025 ft/ft
Roughness Coefficient	0.013
Efficiency	100.00 %
Local Depression	0.0 in
Local Depression Width	0.0 in
Results	
Curb Opening Length	9.5 ft
Intercepted Flow	0.93 cfs
Bypass Flow	0.00 cfs
Spread	3.9 ft
Depth	2.5 in
Flow Area	0.3 ft²
Gutter Depression	1.4 in
Total Depression	1.4 in
Velocity	3.09 ft/s
Equivalent Cross Slope	0.080 ft/ft
Length Factor	1.000
Total Interception Length	9.5 ft

Curb Inlet Length Calc.fm8
9/4/2024

Bentley Systems, Inc. Haestad Methods Solution Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

FlowMaster [10.03.00.03]
Page 1 of 1

Inlet DA-11 Sizing Calculations

FROM POINT	TO POINT	T_c (MINUTES)	RAINFALL (IN/HR)	RUNOFF (CFS)	LINE	INVERT IN	INVERT OUT	LENGTH (FEET)	SLOPE	DIAM. (INCHES)	MANNING'S N COEFF.	CAPACITY (CFS)	VELOCITY (FPS)	FLOW TIME (MINUTES)
1	2	6.87	6.39	6.66	1-2	193.64	193.36	13.57	2.03%	15	0.013	9.20	8.19	0.03
2	3E	6.90	6.39	6.66	2-3E	193.26	192.62	14.90	4.30%	15	0.013	13.39	10.92	0.02
3E	4E	13.56	5.00	6.79	3E-4E	192.46	192.39	13.88	0.50%	15	0.013	4.57	3.73	0.06
4E	5E	13.62	4.99	13.03	4E-5E	186.20	186.10	13.37	0.75%	15	0.013	5.59	4.57	0.05
11	3E	5.00	6.97	0.93	11-3E	190.72	190.49	23.54	1.00%	15	0.013	6.46	3.75	0.10

Storm Sewer, 10 yr.

Time of Concentration

DA	Flow Type	Length	Upper Elev.	Lower Elev.	Slope	Coefficient	Velocity	Tc	Notes
3E	Sheet	62	207.51	203.88	0.059	0.30	-	7.28	
	Sheet	36	203.88	202.44	0.040	0.90	-	2.08	
	SC	378	202.44	198.76	0.010	20.33	2.01	3.14	
	SC	140	198.76	197.14	0.012	20.33	2.19	1.07	
								13.56	
1	Sheet	23	207.82	207.22	0.026	0.90	-	1.87	
	SC	700	207.22	198	0.013	20.33	2.33	5.00	
								6.87	

Time of Concentration

INLET	OUTLET WATER SURFACE ELEV.	D_o	Q_o	L_o	S_{lo}	H_l	JUNCTION LOSS											FINAL H	INLET WATER SURFACE ELEV.	RIM ELEV.
							V_o	H_o	Q_i	V_i	Q_iV_{iMax}	$V_i^2/2g$	H_j	ANGLE	H_Δ	H_t	$1.3H_t$	$0.5H_t$			
4E	187.10	15"	13.03	13.37	4.07	0.54	4.57	0.08	6.79	3.73	25.34	0.22	0.08	90	0.15	0.31			0.85	187.95	198.02
3E	193.39	15"	6.79	13.88	1.11	0.15	3.73	0.05	6.66	10.92	72.74	1.85	0.65	43	0.85	1.56			1.71	195.10	197.03
2	195.10	15"	6.66	14.90	1.06	0.16	10.92	0.46	6.66	8.19	54.54	1.04	0.36	37	0.43	1.26			1.42	196.52	198.19
1	196.52	15"	6.66	13.57	1.06	0.14	8.19	0.31								0.31			0.46	196.97	197.33
11	195.10	15"	0.93	23.54	0.02	0.00	3.75	0.07								0.07			0.07	195.17	197.07

Hydraulic Grade Line, 10 yr.

Post-Development Drainage Areas

Drainage Area	Impervious (SF)	Turf (SF) A	B	C	D	Total Area (SF)	Area (AC)	Weighted C
	0.95	0.17	0.17	0.17	0.17			
DA1	42,192	0	0	0	10537	52,729	1.21	0.79
DA3E	44,051	0	0	0	5791	49,842	1.14	0.86
DA11	5,923	0	0	0	0	5,923	0.14	0.95
Total Onsite	92,166	0	0	0	0	16,328	108,494	2.491	0.83
Total	92,166	0	0	0	0	16,328	108,494	2.491	0.83

Drainage Areas

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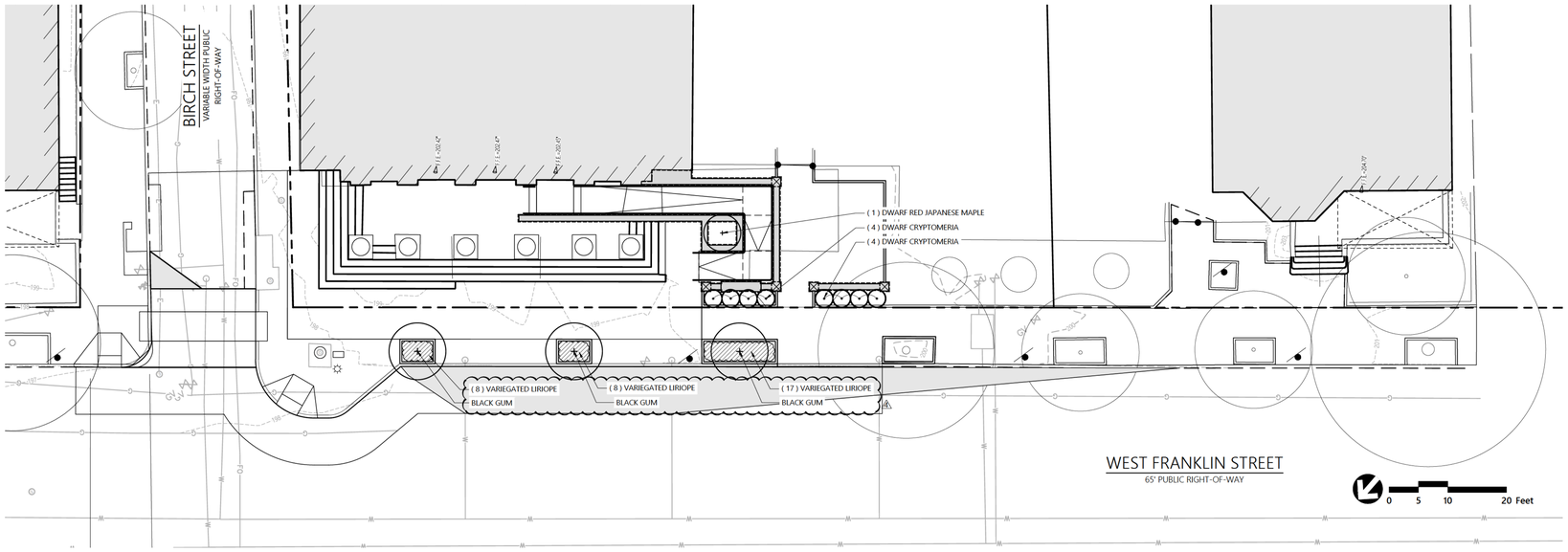
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4	9/5/2024	CITY COMMENTS
5	9/23/2024	CITY COMMENTS
6	9/23/2024	RFI-003
7	9/27/2024	CITY COMMENTS

SHEET TITLE
STORM DRAIN MAP AND CALCULATIONS

SHEET NUMBER
C5.01

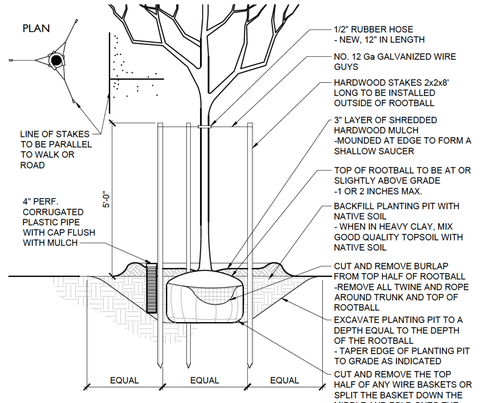
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PLANT SCHEDULE

TREES	QTY	BOTANICAL	COMMON	SIZE	SPACING
	1	ACER PALMATUM 'CRIMSON QUEEN'	DWF RED JAPANESE MAPLE	10 GAL	SHOWN
	3	NYSSA SYLVATICA	BLACK GUM	2" CAL	SHOWN
SHRUBS	**QTY**	**BOTANICAL**	**COMMON**	**SIZE**	**SPACING**
	8	CRYPTOMERIA JAPONICA 'NANA'	DWF CRYPTOMERIA	7 GAL	36" o.c.
PERENNIALS					
	33	LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LIRIOPE	1 GAL	18" o.c.
MULCH					
	175	MULCH SF			

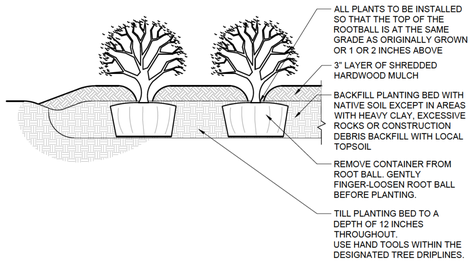


A DECIDUOUS TREE STAKING DETAIL

NOT TO SCALE

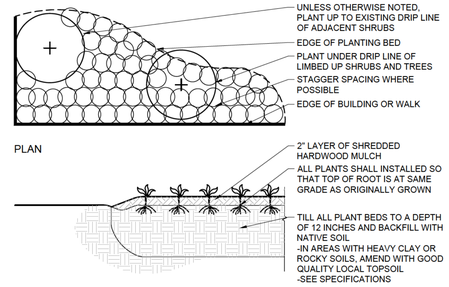
Notes

1. CONTRACTOR SHALL VERIFY PLANT MATERIAL QUANTITIES SHOWN ON PLAN WITH TOTALS IN PLANTING SCHEDULE. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING. UNIT PRICES SHALL BE SUBMITTED AS PART OF FINAL BID.
2. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR TO BE IN A HEALTHY GROWING CONDITION. PLANT MATERIALS WHICH DO NOT FULFILL THIS GUARANTEE SHALL BE REPLACED AT NO COST TO THE OWNER. REPLACEMENT SHALL BE GUARANTEED THROUGHOUT THE ORIGINAL GUARANTEE PERIOD. PLANTS THAT DIE SHALL BE REPLACED IMMEDIATELY.
3. THERE IS NO IRRIGATION ON THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING MISS UTILITY PRIOR TO BEGINNING OF CONSTRUCTION FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT IF ANY CONFLICTS OCCUR.
5. THE LANDSCAPE ARCHITECT IS THE OWNERS REPRESENTATIVE AND SHALL BE THE APPROVING AUTHORITY FOR INFORMATION PROVIDED IN THESE PLANS AND SPECIFICATIONS.
6. ALL PLANT MATERIALS, TOPSOIL, MULCH, FERTILIZERS, SOIL AMENITIES, PLANTING SUPPLIES AND METHODS SHALL BE SUBJECT TO LANDSCAPE ARCHITECTS APPROVAL. REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE WITHOUT DELAY.
7. ALL PLANT MATERIALS AND PLANTING METHODS SHALL CONFORM TO A.A.N. STANDARDS.
8. CONTRACTOR SHALL LAYOUT AND MARK LOCATION FOR ALL PLANT MATERIAL, PLANTING, AND IMPROVEMENTS SHOWN AND REQUEST IN FIELD APPROVAL FROM LANDSCAPE ARCHITECT.
9. BEDS TO CONTAIN SHRUBS OR GROUND COVER SHALL BE TILLED TO A DEPTH OF 6" AND THE SOIL CONDITIONED BY ADDING CLEAN, WELL ROTTED MANURE. IF EXISTING SOIL IS CONSIDERED TO BE UNUSABLE BY OWNER, BEDS SHALL BE TREATED TO ELIMINATE WEEDS AND WEED SEEDS.
10. ALL PLANTING BED AREAS SHALL BE COVERED WITH A 3" MINIMUM LAYER OF MEDIUM TEXTURE TRIPLE SHREDDED HARDWOOD MULCH UNLESS OTHERWISE NOTED. EVERGREEN GROVE SHALL BE COVERED WITH A 3" MINIMUM LAYER OF PINE STRAW.
11. ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE REQUESTED IN WRITING TO THE LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER.
12. ALL PLANTING OPERATIONS SHALL BE UNDER THE SUPERVISION OF AN EXPERIENCED PLANTSMAN.
13. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SELECT PLANT MATERIALS IN THE NURSERY.
14. FOR TREES BALLED IN WIRE BASKETS, CUT AND REMOVE TOP AND SIDES OF BASKET AFTER INSTALLATION.
15. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO A.A.N. STANDARDS. SEE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1-(CURRENT EDITION).
16. SOIL SHALL BE FREE OF ALL WEEDS.
17. PLANT SIZES, QUANTITIES, AND SPECIES WILL BE CHECKED BY LANDSCAPE ARCHITECT FOR COMPLIANCE WITH PLANT SCHEDULE AS APPROVED BY THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DELAY IN ISSUANCE OF CERTIFICATE OF OCCUPANCY BY THE LANDSCAPE ARCHITECT RESULTING FROM UNATHORIZED SUBSTITUTIONS OR DOWNSIZING.
18. UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL, AND SCHEDULE A FINAL INSPECTION FOR ACCEPTANCE BY OWNER
19. THE ONE YEAR GUARANTEE PERIOD SHALL BEGIN UPON THE OWNER'S APPROVAL AND ACCEPTANCE OF THE PLANTING INSTALLATION. THE OWNER SHALL ASSUME RESPONSIBILITY FOR MAINTENANCE INCLUDING WATERING, WEEDING, PEST CONTROL, AND FERTILIZATION.
20. CONTRACTOR SHALL REMOVE STAKING FROM TREES AT THE END OF THE ONE YEAR WARRANTY PERIOD.
21. CONTRACTOR TO PROVIDE MAINTENANCE & WATERING SCHEDULE SPECIFICATIONS BOOKLET FOR ALL INSTALLED PLANTS.
22. ALL SUBSTITUTES TO BE APPROVED BY LANDSCAPE ARCHITECT. ONLY NATIVE SPECIES WILL BE CONSIDERED.
23. FILL RAISED PLANTER WITH AMENDED TOPSOIL.
24. AMEND SHRUB PLANTING BEDS PER SOIL PROFILE REBUILDING BELOW.
25. TREE PITS WITH EXISTING TREES SHALL NOT BE TILLED TO PREVENT ROOT DAMAGE.



B SHRUB PLANTING DETAIL

NOT TO SCALE



C GROUNDCOVER PLANTING BED DETAIL

NOT TO SCALE

Soil Profile Rebuilding

1. PURPOSE AND DESCRIPTION

1.1 Purpose

Soil Profile Rebuilding is an appropriate soil restoration technique for sites where topsoil has been completely or partially removed and subsoil layers have been compacted (graded and/or trafficked by equipment). It may also be used with some modifications if topsoil is present. This is not an appropriate technique in sites with surface compaction only (6 inches or less), although this situation is rare on construction sites. This technique is not appropriate within the root zones of trees that are to be protected. Soil Profile Rebuilding can improve physical and biological characteristics of soil to allow for revegetation. Soil chemical problems, soil contamination from heavy metals, pathogens, or excessive debris or gravel shall be addressed separately.

1.2 Description of Procedure

The procedure includes a subsoiling procedure, addition of organic matter in the form of compost, replacement or addition of topsoil, and subsequent planting with woody plants. The soil preparation portion of Soil Profile Rebuilding puts the components in place for restoration to characteristics similar to undisturbed soils, however, the complete restoration process requires root activity and occurs over many years. This technique may be appropriate for restoration of disturbed soils as defined by SITES™.

1.3 Expected Outcomes

Soil Profile Rebuilding may improve vegetation establishment, increase tree growth rates, increase soil permeability, enhance formation of aggregates in the subsoil, and enhance long-term soil carbon storage.

2. PROCEDURE

Location

Profile Rebuilding shall occur on all soil areas that are to be vegetated that have been disturbed by trafficking or grading during construction or prior to construction. Soil areas that are not to be treated should be protected by permanent fencing during the construction period and all access to these areas proh bited. A soil map delineating protected areas and areas to be treated shall be approved by the owner, arborist, or landscape architect before grading or construction begins.

2.2 Sequencing

Profile Rebuilding shall occur after site disturbance is complete, including all vehicle and equipment trafficking, but before replacement of topsoil. Once profile rebuilding is complete, all traffic and equipment or materials storage on treated areas is prohibited with the exception of foot traffic for the purposes of planting or mulching.

If topsoil is already present and is 4 inches or greater in depth, use the "modifications for pre- existing topsoil."

2.3 Remove foreign materials

Remove all foreign materials resulting from construction operations, including oil drippings, stone, gravel, and other construction materials from the existing soil surface.

2.4 Application of Compost

Spread mature, stable compost (see Section 3. Definitions for definition of compost) to a 4 inch depth over compacted subsoil.

2.5 Subsoiling

Subsoiling may be performed when soil is neither wet nor dry. If a shovel cannot be forced into the soil, it is too dry. If the surface is sticky or muddy, it is too wet. Use a backhoe rearbucket or similar equipment with a tined bucket to break up the compacted soil and incorporate the compost. Work backwards away from excavated soils so that treated soil is not trafficked by the equipment. Insert the bucket through the compost layer and into the subsoil to a depth of 24 inches and raise a bucket of soil at least 24 inches above the soil surface. Tip the bucket and allow soil to fall. Repeat this procedure until no clumps of compacted soil larger than 12 inches in diameter remain. The tines of the bucket can be used to break apart larger clumps if necessary. 50% of the soil shall be in clumps 6 inches or smaller. No clumps shall be greater than 18" in diameter. The subsoiling is not intended to homogenize the compost and soil, but rather loosen the soil to a 24-inch depth and create veins of compost down to that depth as well. To ensure that subsoiling reached the appropriate depth, a push tube soil sampler shall be used to verify compost is present at 24 inch depth.

2.6 Replacement of topsoil

2.6.1 Standard procedure

Stockpiled topsoil, or additional topsoil if none is available from the site, shall be returned to the site to a 4 inch minimum depth (see *Section 3.3 Definitions* for definition of topsoil). If soil was severely disturbed (see definitions), a 6-8 inch minimum shall be replaced.

2.6.2 Modification if significant topsoil is already present before Profile Rebuilding is initiated

Case 1:

At least four inches of topsoil is present on the site after construction activities are completed AND soil **is not** severely disturbed (see *Section 3.3 Definitions* for description of severely disturbed).

Case 2:

Less than 4 inches of topsoil is present on site after construction activities were completed but before Profile Rebuilding is initiated, OR soil is severely disturbed (see *Section 3.3 Definitions* for description of severely disturbed).

For Case 1: A minimum of 3 inches additional topsoil shall be placed over the subsoiled layer before tilling.

For Case 2: Follow *Section 2.6.1 Standard procedure*, as if no topsoil had been present.

2.7 Tilling

Rototill topsoil to a depth of 6-8 inches when soil is neither dry nor very moist. Rototilling depth should cross the interface with the subsoiled layer by a minimum of 1 inch and can be verified with a random sampling with a push tube soil sampler.

2.8 Planting

Plant the site with woody plants, trees or shrubs, at a density that insure a minimum of 50% of the site will be occupied with roots within 10 years. Planting of at least one large stature tree (e.g., one that will mature at approximately 60-70 feet in height) or 20 medium stature shrubs per 5,000 sq. ft. shall be considered to achieve this.

3. DEFINITIONS

3.1 Topsoil

Soil can be considered topsoil if it originates from an A horizon of a natural soil or is a mineral soil with 3% or greater organic matter content and a NRCS textural class similar to pre-development A horizon soils for the site or as specified by the owner, arborist, or landscape architect. Blended soils shall not be used unless specified by the owner, arborist, or landscape architect. In addition topsoil shall:

1. Be friable and well drained
2. have a pH between 5.2 and 7.5 (a narrower range may be specified for particular plant material)
3. have an organic matter content not less than 3%
4. have low salinity as indicated by an electrical conductivity of less than 4.0 mmhos/cm
5. be free of debris, stones, gravel, trash, large sticks, heavy metals, and other deleterious contaminants, (if screening is used to remove debris, screen size must be ¾ inch or larger).
6. have a nutrient profile such that it is able to support plant growth
7. be free of noxious weed seeds

3.2 Compost

Compost feedstock shall be leaves, yardwaste, or foodwaste. Biosolid-based composts shall not be used. A compost sample with analysis shall be submitted for approval to the client before application.

Stability refers to the rate of biological breakdown, measured by carbon dioxide release. Maturity refers to completeness of the aerobic composting process and suitability (lack of plant toxicity) as a plant growth media, often measured by ammonia release and by plant growth tests. Compost manufacturers that subscribe to the US Composting Council's testing program may document stability as compost testing 7 or below in accordance with TMECC 05.08-B, "Carbon Dioxide Evolution Rate". Maturity (suitability for plant growth) may be documented as compost testing greater than 80% in accordance with TMECC 05.05-A, "Germination and Vigor". Compost is considered mature and stable if it tests at 6.0 or higher on the Solvita Compost Maturity Index Rating, which is a combination of Carbon Dioxide and Ammonia Maturity Tests (test information and equipment available at www.solvita.com).

Compost shall also:

1. Free of weed seeds
2. Free of heavy metals or other deleterious contaminants
3. Have an EC of less than 4.0 mmhos/cm

3.3 Severely Disturbed Soil

Soil shall be considered *severely disturbed* if grade was lowered more than 14 inches OR soil was compacted in lifts regardless of the final grade.

4. SUBMITTALS

4.1 Soil Map

A soil map indicating soil areas to be protected and those to be restored via Soil Profile Rebuilding shall be submitted by the contractor for approval by the owner, arborist, or landscape architect before construction begins.

4.2 Compost

A compost sample with analysis certifying it is stable, mature, from acceptable feedstocks and free of contaminants and weed seeds shall be submitted for approval to the landscape architect or owner before compost is applied to the soil.

4.3 Topsoil

A topsoil sample with analysis from a certified testing laboratory and verification of source shall be submitted for approval to the landscape architect or owner before application. Separate documentation is required for each 100 cubic yards of topsoil unless otherwise approved by the landscape architect or owner.

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No. 271
LANDSCAPE ARCHITECT

PROJECT NUMBER
G&H#: 23028

DATE
MAY 31, 2024

DRAWN BY: JRD CHECKED BY: ELG

REVISIONS

NO.	DATE	DESCRIPTION
1	6/26/2024	REVISION 1 - MATERIAL SPECIFICATIONS
2	7/24/2024	REVISION 2
4	9/5/2024	CITY COMMENTS

SHEET TITLE
LANDSCAPE PLAN

SHEET NUMBER
L1.01

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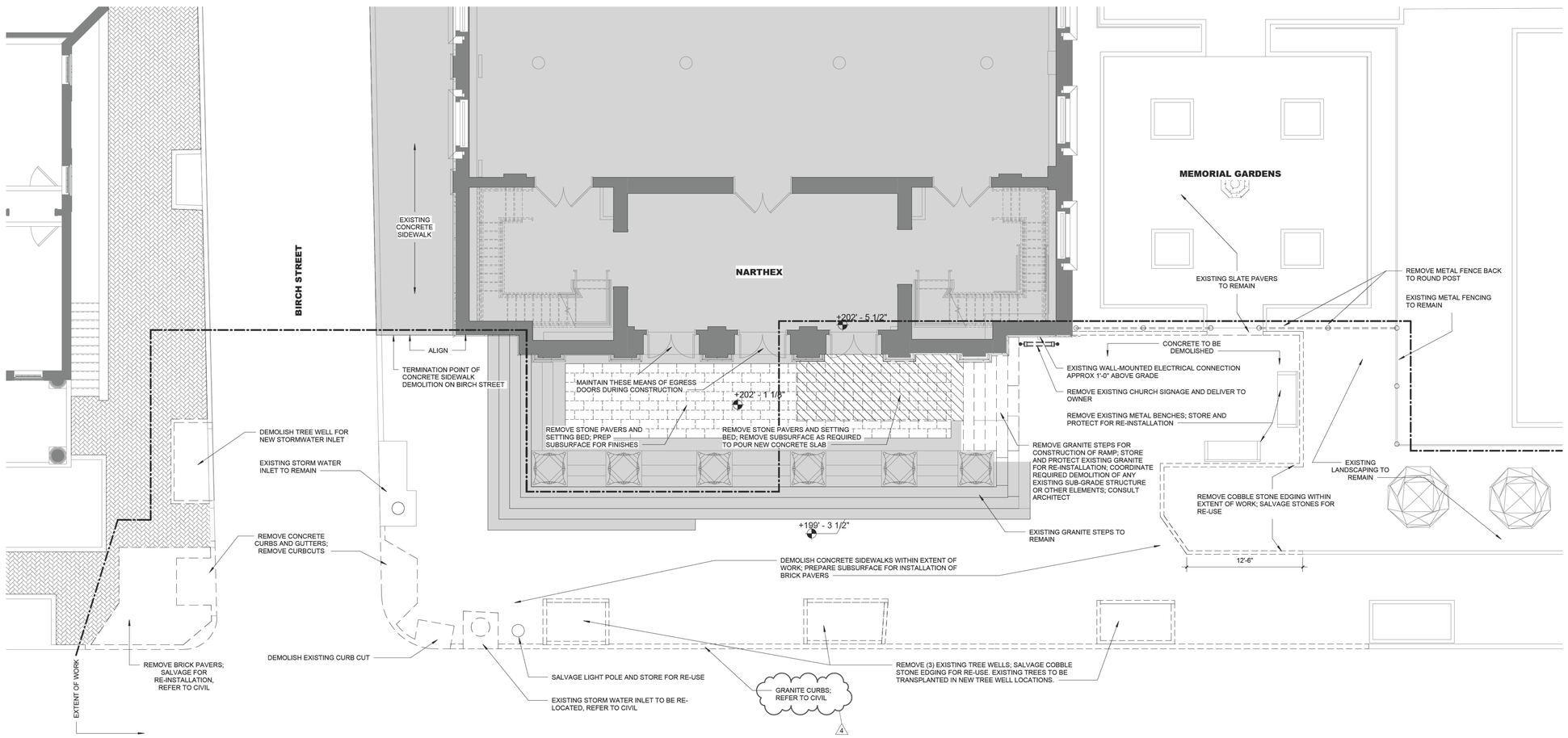
LEGEND - existing/new

EXISTING WALL AND/OR SITE ELEMENT TO BE DEMOLISHED OR REMOVED

EXISTING WALL, WINDOW, AND/OR DOOR TO REMAIN

GENERAL DEMOLITION NOTES

1. THE OWNER RESERVES THE RIGHT TO KEEP ANY MATERIALS THAT ARE DESIGNATED FOR REMOVAL. COORDINATE REMOVALS WITH OWNER. CAREFULLY REMOVE ITEMS IDENTIFIED TO BE KEPT BY OWNER AND STORE AT THE LOCATION DESIGNATED BY OWNER.
2. WHEN ENCOUNTER ANY PREVIOUSLY INSTALLED, UNREFERENCED, OR UNDOCUMENTED FINISHES BENEATH FINISHES SCHEDULED FOR DEMOLITIONS, MINIMIZE DAMAGE TO THE UNDERLYING FINISH AND NOTIFY THE ARCHITECT OF RECORD FOR ADDITIONAL DIRECTION. COORDINATE DEMOLITION WITH NEW CONSTRUCTION. MASONRY OR FRAMED OPENINGS AND ADJACENT FINISHES IN EXISTING WALLS, PARTITIONS, FLOORS, AND CEILINGS SHALL HAVE CLEAN SAW CUT EDGES AND PREPARED TO RECEIVE NEW WORK. SALVAGED MASONRY SHALL BE KEYED-IN TO MATCH EXISTING.



DEMOLITION SITE PLAN

3/16" = 1'-0"

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NO	DATE	DESCRIPTION
4	9/05/2024	CITY COMMENTS

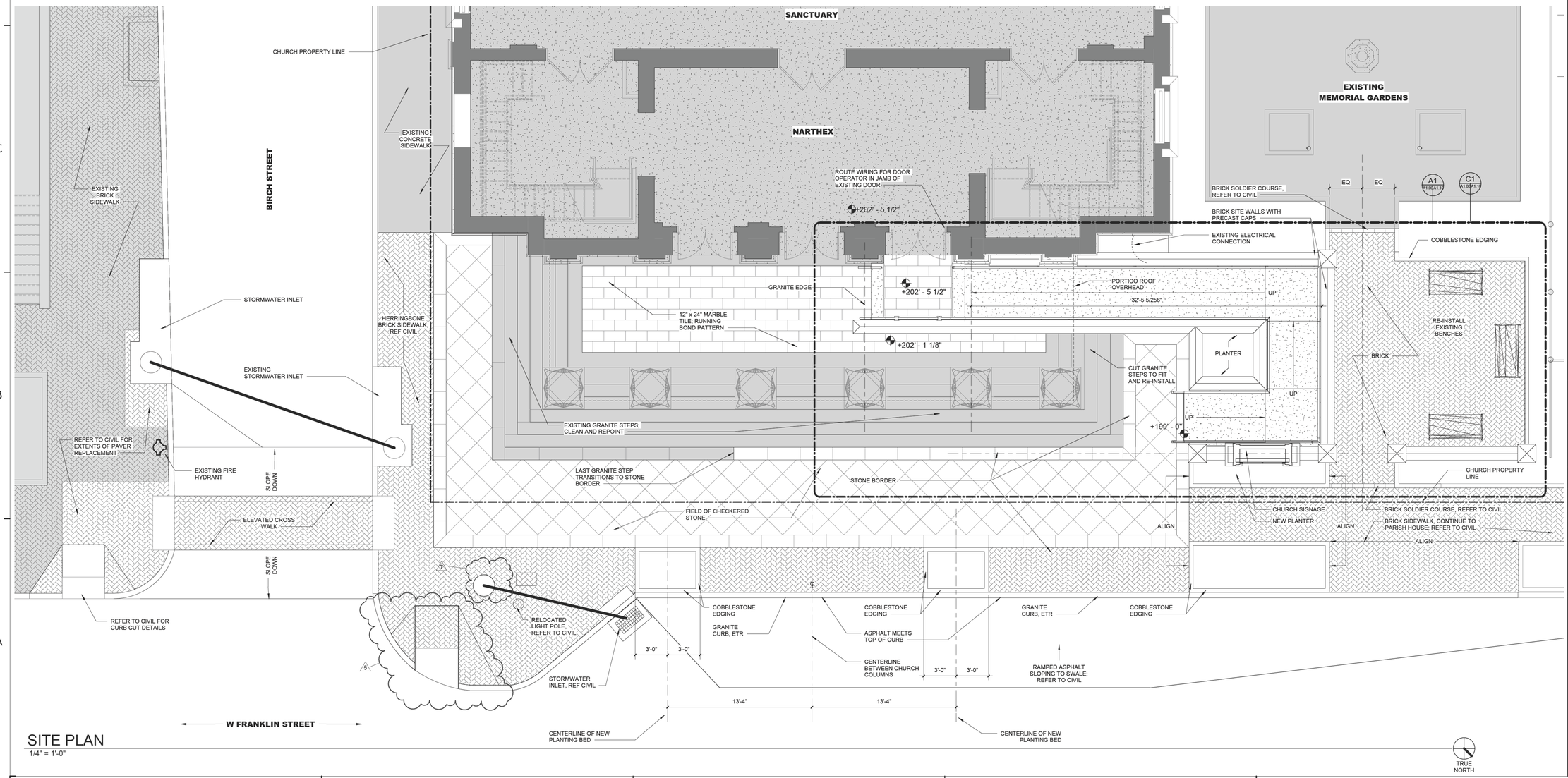
SHEET TITLE
DEMOLITION PLANS

SHEET NUMBER
AD1.01

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CONSTRUCTION NOTES

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2. COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL REQUIRED ROUGH-INS AND/OR TRENCHING REQUIRED FOR ELECTRICAL RUNS.
3. SURFACES (FLOORS, WALLS, CEILINGS, ETC.) DAMAGED OR EXPOSED DURING WORK SHALL BE REPAIRED, PATCHED, AND FINISHED AS REQUIRED TO MATCH ADJACENT MATERIALS.
4. CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 1:48.



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

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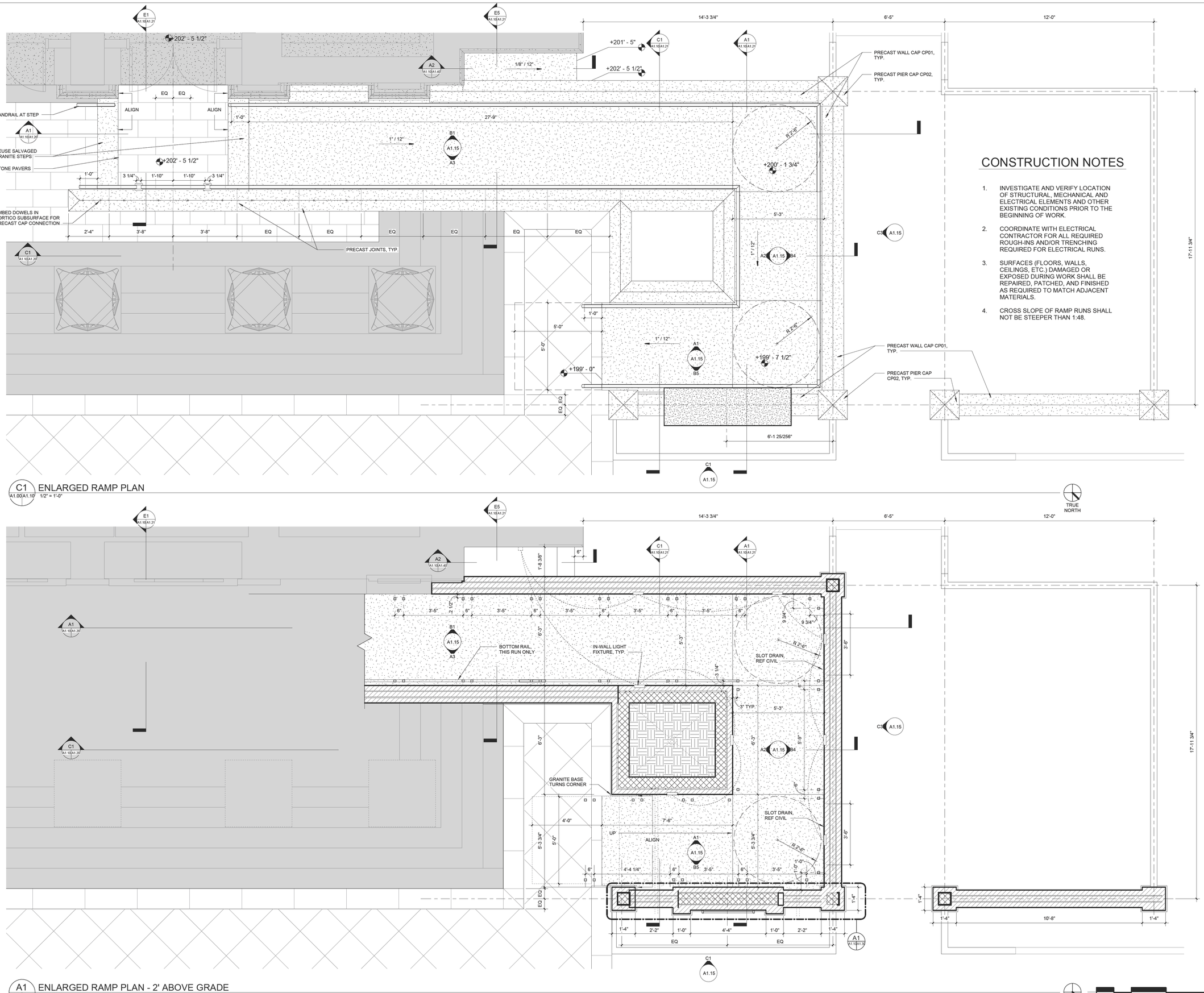
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4	9/05/2024	CITY COMMENTS
5	9/23/2024	FRANKLIN ST CURB CUT
7	9/27/2024	CITY COMMENTS

SHEET TITLE
ARCHITECTURAL SITE PLAN

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A1.00

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4. CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 1:48.

C1 A1.00|A1.10 ENLARGED RAMP PLAN
1/2" = 1'-0"

A1 A1.00|A1.10 ENLARGED RAMP PLAN - 2' ABOVE GRADE
1/2" = 1'-0"

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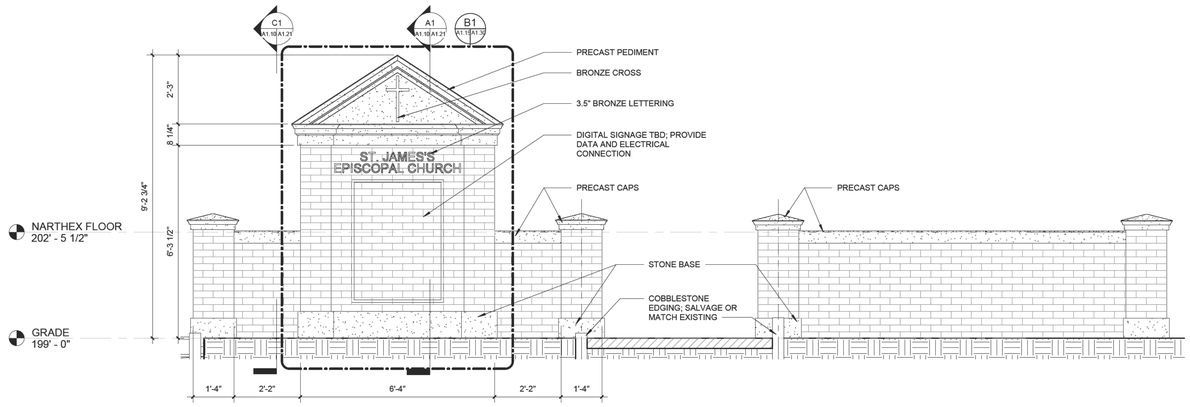
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ENLARGED RAMP PLANS

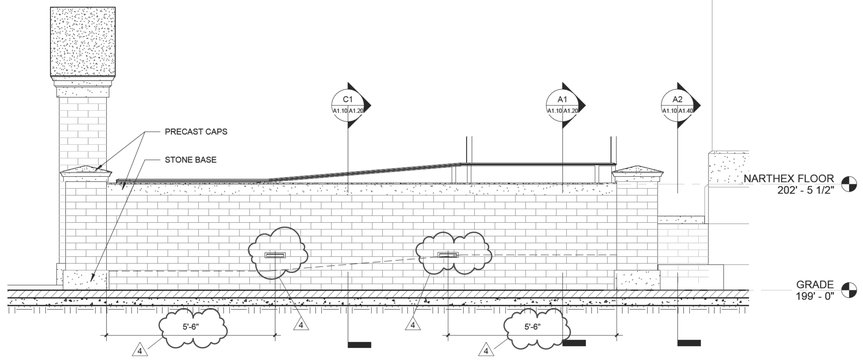
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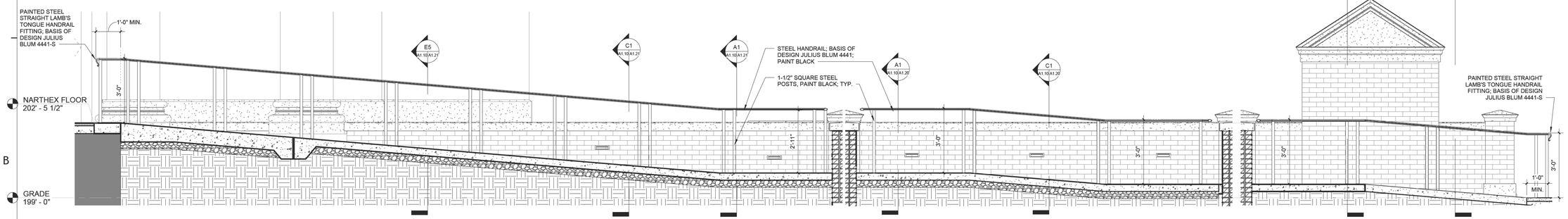
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C1 A1.10|A1.15 SIGNAGE ELEVATION 1/2" = 1'-0"



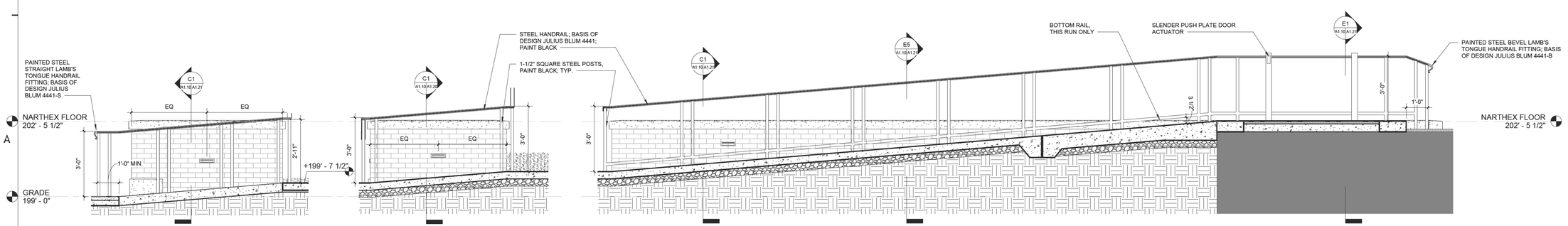
C3 A1.10|A1.15 OUTER RAMP WALL - WEST ELEVATION 1/2" = 1'-0"



B1 A1.10|A1.15 OUTER RAMP WALL - NORTH ELEVATION 1/2" = 1'-0"

B4 A1.10|A1.15 OUTER RAMP WALL - EAST ELEVATION 1/2" = 1'-0"

B5 A1.10|A1.15 OUTER RAMP WALL - SOUTH ELEVATION 1/2" = 1'-0"



A1 A1.10|A1.15 INNER RAMP WALL - NORTH ELEVATION 1/2" = 1'-0"

A2 A1.10|A1.15 INNER RAMP WALL - WEST ELEVATION 1/2" = 1'-0"

A3 A1.10|A1.15 INNER RAMP WALL - SOUTH ELEVATION 1/2" = 1'-0"

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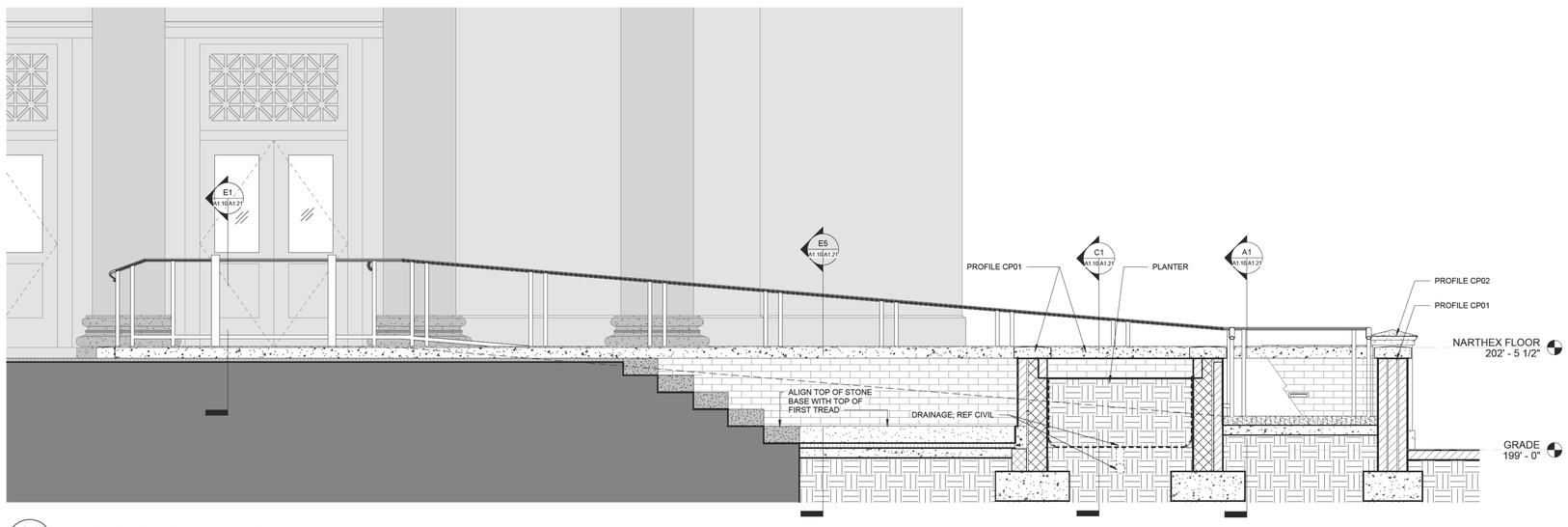
REVISIONS

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3	7/31/2024	REV 3- MATERIAL UPDATES
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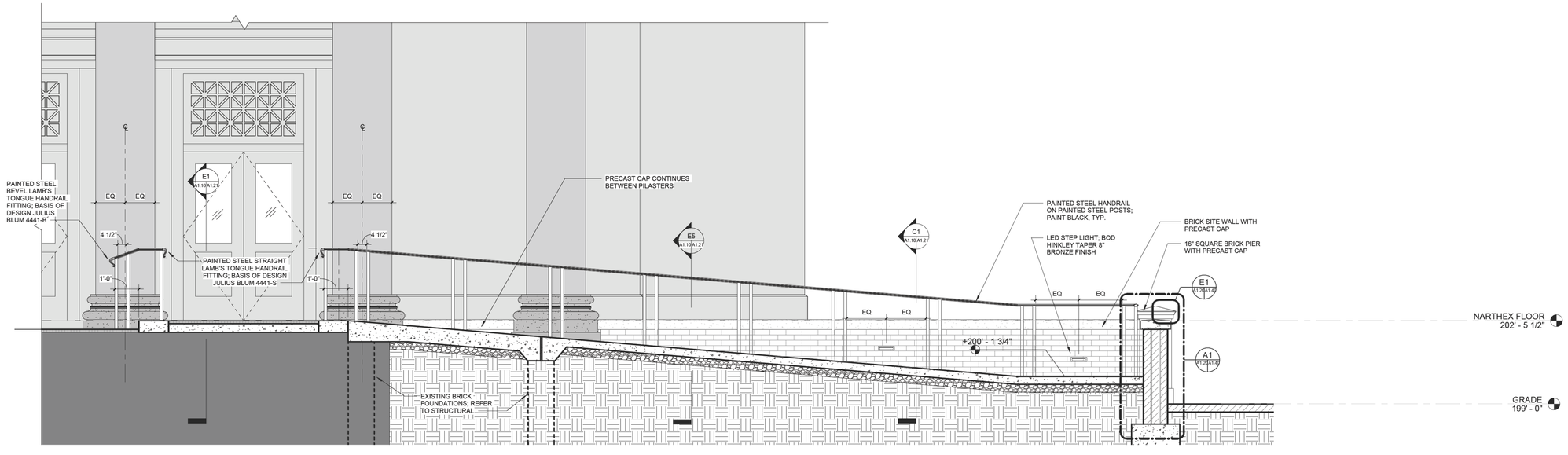
SHEET TITLE
ELEVATIONS

SHEET NUMBER
A1.15

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C1 A1.10|A1.20 NORTH ELEVATION & SECTION 1/2" = 1'-0"



A1 A1.10|A1.20 LONGITUDINAL RAMP SECTION 1/2" = 1'-0"

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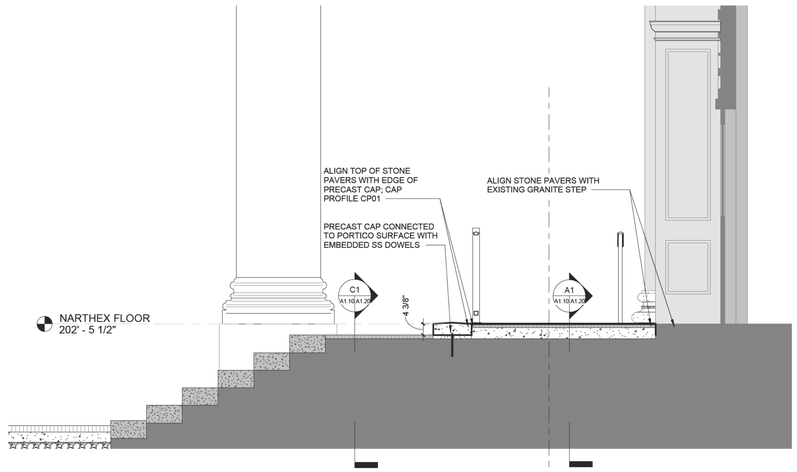
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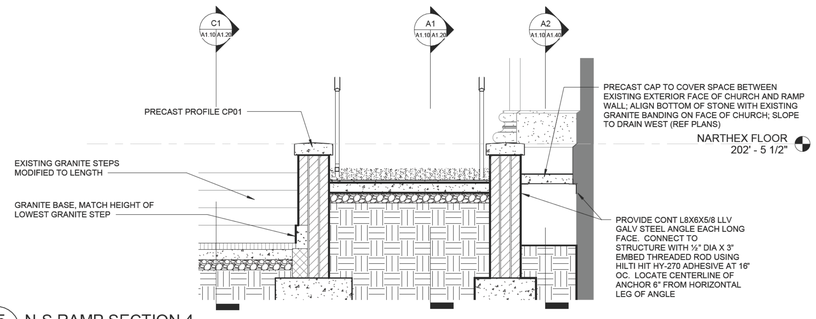
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RAMP SECTIONS

SHEET NUMBER
A1.20

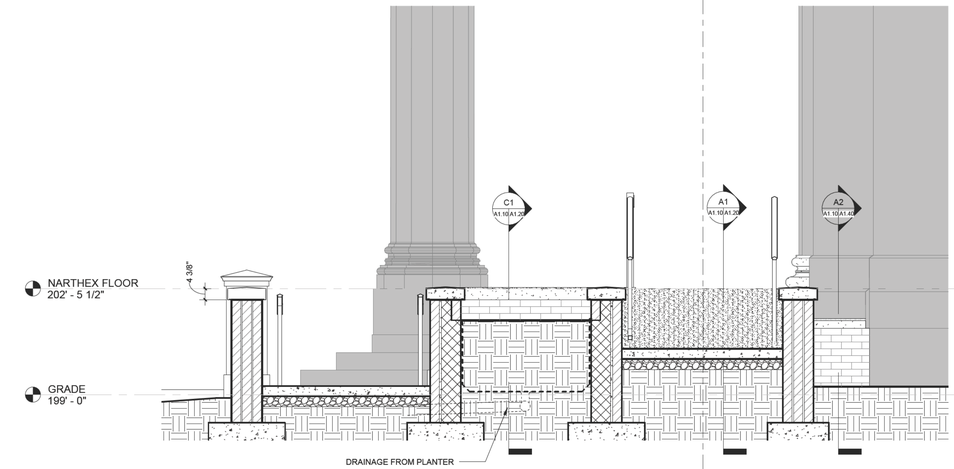
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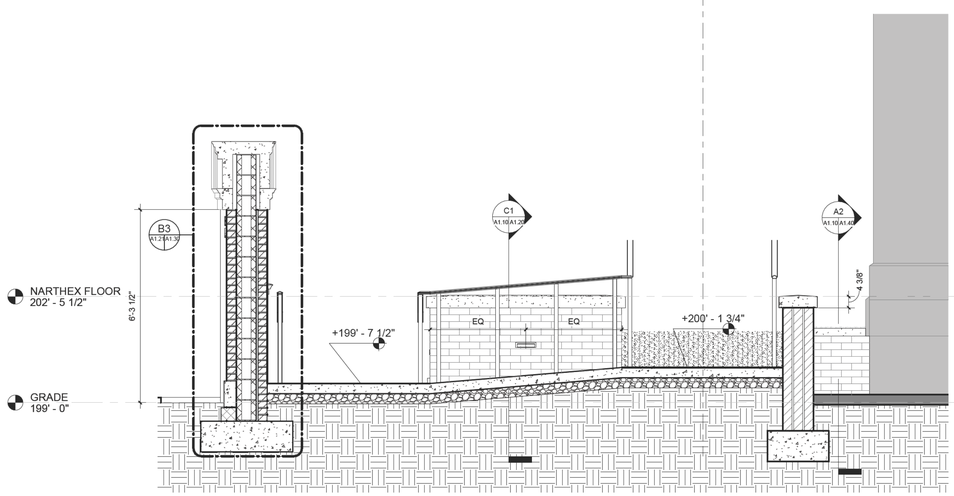
E1 N-S RAMP SECTION 3
A1.10|A1.21 1/2" = 1'-0"



E5 N-S RAMP SECTION 4
A1.10|A1.21 1/2" = 1'-0"



C1 N-S RAMP SECTION 2
A1.10|A1.21 1/2" = 1'-0"



A1 N-S RAMP SECTION 1
A1.10|A1.21 1/2" = 1'-0"

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PROJECT TITLE

ST JAMES'S RAMP AND ROAD PROJECT

St. James's Episcopal Chuch

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By Taylor & Parrish
Dated: September 5, 2024

SEAL
COMMONWEALTH OF VIRGINIA
05/31/2024
H. Randolph Holmes Jr.
Cert. No. 5954
ARCHITECT

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: CHECKED BY:

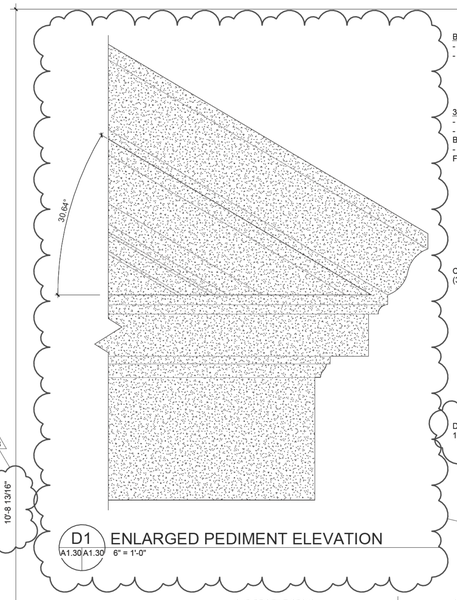
REVISIONS

NO	DATE	DESCRIPTION
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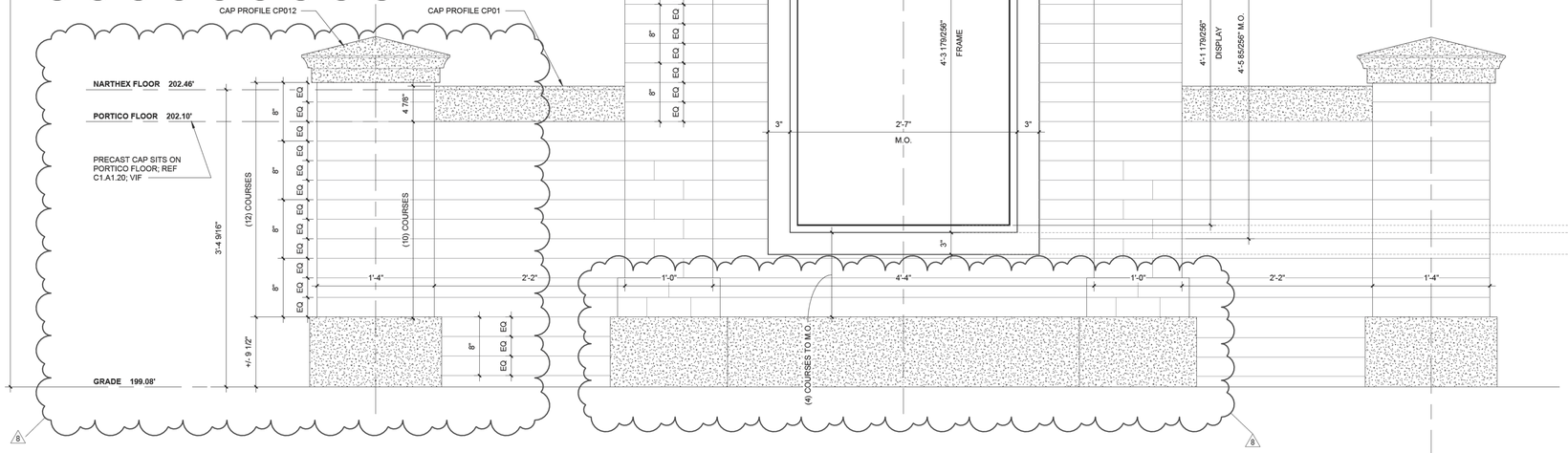
SHEET TITLE
RAMP SECTIONS

SHEET NUMBER
A1.21

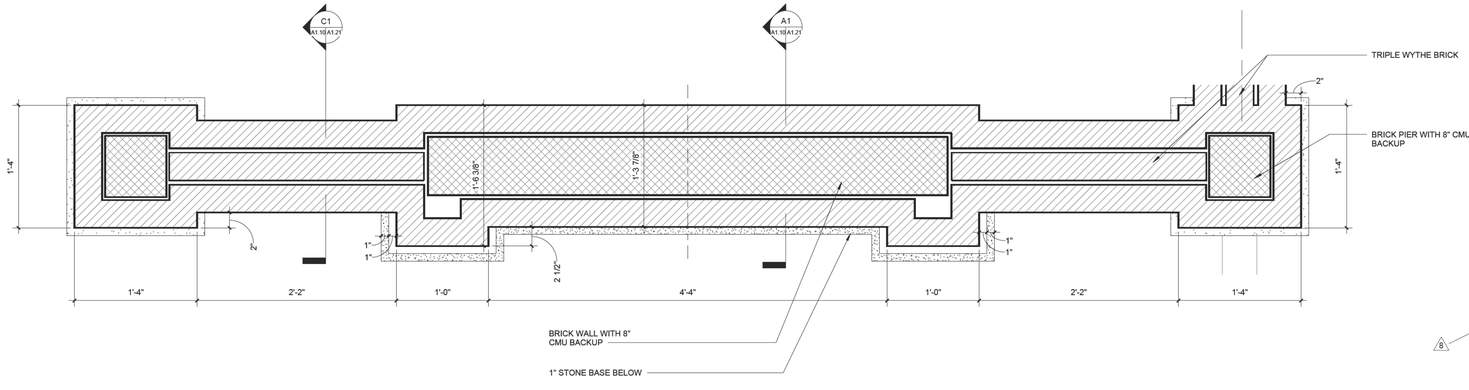
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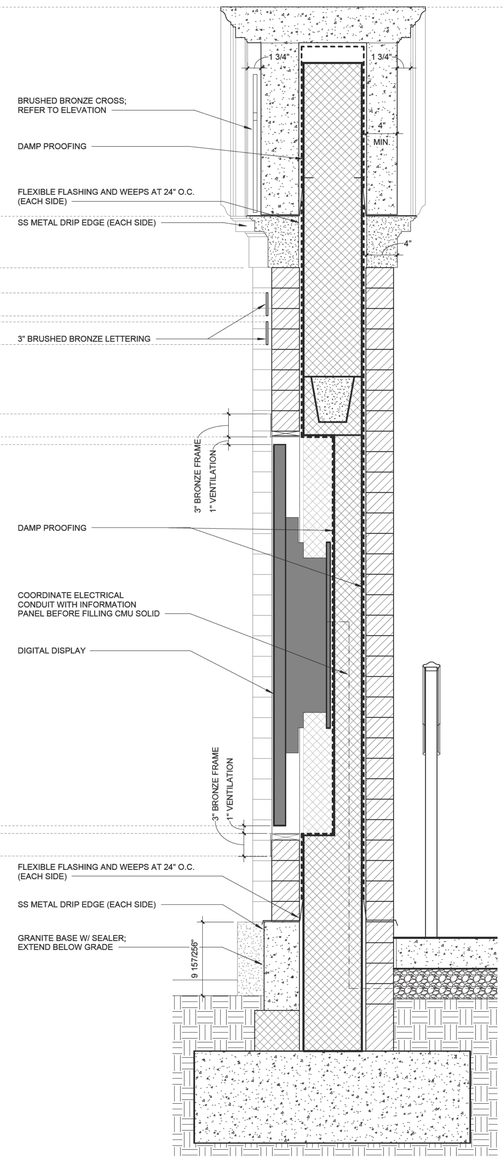
D1 A1.30|A1.30 ENLARGED PEDIMENT ELEVATION 6" = 1'-0"



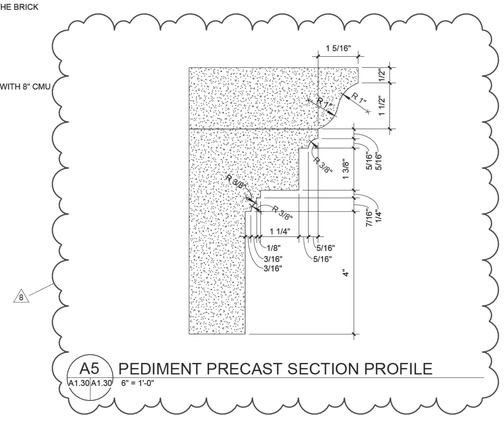
B1 A1.10|A1.30 ENLARGED ELEVATION - BRICK SIGNAGE WALL 1 1/2" = 1'-0"



A1 A1.10|A1.30 PLAN DETAIL - BRICK SIGNAGE WALL 1 1/2" = 1'-0"



B3 A1.21|A1.30 WALL SECTION - BRICK SIGNAGE WALL 1 1/2" = 1'-0"



A5 A1.30|A1.30 PEDIMENT PRECAST SECTION PROFILE 6" = 1'-0"

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H. Randolph Holmes Jr.
Cert. No. 5954
ARCHITECT

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: DM CHECKED BY: WS

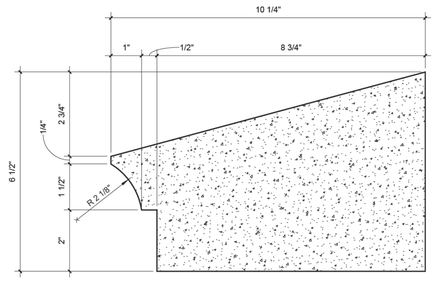
REVISIONS

NO	DATE	DESCRIPTION
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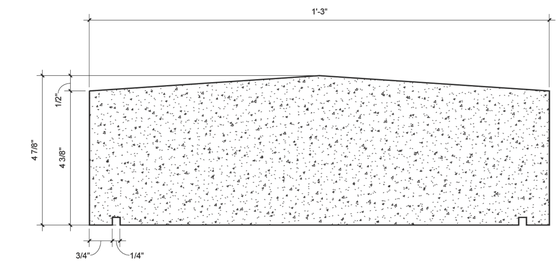
SHEET TITLE
SIGNAGE DETAILS

SHEET NUMBER
A1.30

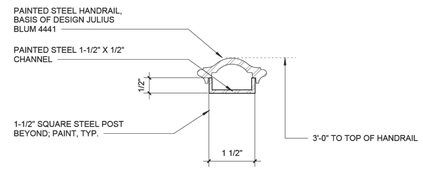
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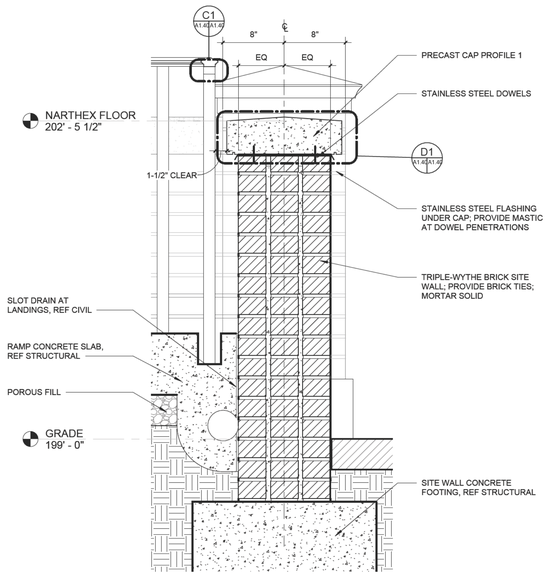
E1 PRECAST PROFILE CP02
A1.20 A1.40 6" = 1'-0"



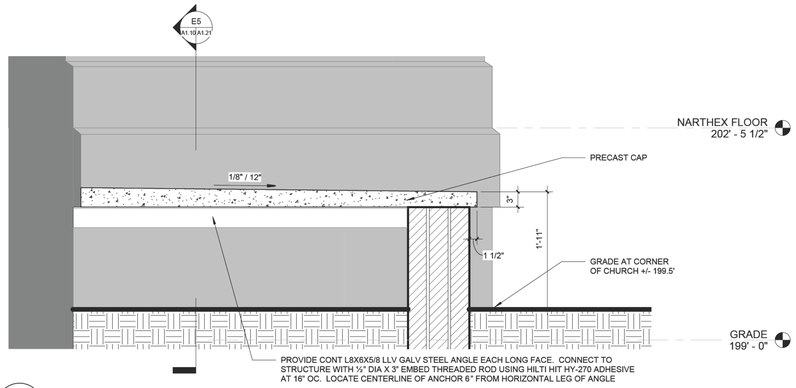
D1 PRECAST PROFILE CP01
A1.40 A1.40 6" = 1'-0"



C1 SECTION DETAIL - HANDRAIL
A1.40 A1.40 6" = 1'-0"



A1 SECTION DETAIL - RAMP SITE WALL
A1.20 A1.40 1 1/2" = 1'-0"



A2 SECTION DETAIL AT CORNER OF CHURCH
A1.10 A1.40 1" = 1'-0"

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REVISIONS

NO	DATE	DESCRIPTION
3	7/31/2024	REV 3- MATERIAL UPDATES

SHEET TITLE
SECTION DETAILS

SHEET NUMBER
A1.40

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DIVISION 1:

SECTION 011000 - SUMMARY

1.1 ACCESS TO SITE

A) CONTRACTOR SHALL HAVE LIMITED USE OF PROJECT SITE FOR CONSTRUCTION OPERATIONS DURING CONSTRUCTION PERIOD AS INDICATED ON DRAWINGS BY THE CONTRACT LIMITS. DO NOT DISTURB PORTIONS OF PROJECT SITE BEYOND AREAS IN WHICH THE WORK IS INDICATED. CONTRACTOR SHALL NOT HINDER THE OWNER'S DAILY OPERATIONS. COORDINATE ACTIVITIES WITH OWNER. KEEP STREETS, LOADING AREAS, AND ENTRANCES SERVING PREMISES CLEAR AND AVAILABLE TO OWNER, OWNER'S EMPLOYEES, AND EMERGENCY VEHICLES AT ALL TIMES. DO NOT USE THESE AREAS FOR PARKING OR STORAGE OF MATERIALS. SCHEDULE DELIVERIES TO MINIMIZE USE OF STREETS AND ENTRANCES BY CONSTRUCTION OPERATIONS.

B) MAINTAIN PORTIONS OF EXISTING GROUNDS, LANDSCAPING, AND HARDSCAPPING AFFECTED BY CONSTRUCTION OPERATIONS THROUGHOUT CONSTRUCTION PERIOD. REPAIR DAMAGE CAUSED BY CONSTRUCTION OPERATIONS.

1.2 COORDINATION WITH OCCUPANTS

A) OWNER WILL OCCUPY SITE, EXISTING AND ADJACENT BUILDING (S) DURING ENTIRE CONSTRUCTION PERIOD, WITH THE EXCEPTION OF AREAS UNDER CONSTRUCTION. COOPERATE WITH OWNER DURING CONSTRUCTION OPERATIONS TO MINIMIZE CONFLICTS AND FACILITATE OWNER USAGE. PERFORM THE WORK SO AS NOT TO INTERFERE WITH OWNER'S DAY-TO-DAY OPERATIONS

B) MAINTAIN EXISTING EXITS UNLESS OTHERWISE INDICATED. MAINTAIN ACCESS TO EXISTING WALKWAYS, STREET, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT WALKWAYS, STREET, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT WRITTEN PERMISSION FROM OWNER AND APPROVAL OF AUTHORITIES HAVING JURISDICTION. NOTIFY OWNER NOT LESS THAN 72 HOURS IN ADVANCE OF ACTIVITIES THAT WILL AFFECT OWNER'S OPERATIONS.

C) OWNER RESERVES THE RIGHT TO OCCUPY AND TO PLACE AND INSTALL EQUIPMENT IN COMPLETED PORTIONS OF THE WORK, PRIOR TO SUBSTANTIAL COMPLETION OF THE WORK, PROVIDED SUCH OCCUPANCY DOES NOT INTERFERE WITH COMPLETION OF THE WORK. SUCH PLACEMENT OF EQUIPMENT AND LIMITED OCCUPANCY SHALL NOT CONSTITUTE ACCEPTANCE OF THE TOTAL WORK.

1.3 WORK RESTRICTIONS

A) COMPLY WITH RESTRICTIONS ON CONSTRUCTION OPERATIONS. COMPLY WITH LIMITATIONS ON USE OF PUBLIC STREETS, WORK ON PUBLIC STREETS, RIGHTS OF WAY AND WITH OTHER REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

B) COORDINATE LIMITATIONS TO ON-SITE WORK HOURS IN AND AROUND THE EXISTING BUILDING WITH OWNER AND THEIR ON-SITE ACTIVITIES, UNLESS OTHERWISE INDICATED.

C) DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER PROVIDING TEMPORARY UTILITY SERVICES ACCORDING TO THE REQUIREMENTS INDICATED: NOTIFY OWNER NOT LESS THAN TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS. OBTAIN OWNER'S WRITTEN PERMISSION BEFORE PROCEEDING WITH UTILITY INTERRUPTIONS.

D) COORDINATE OPERATIONS THAT MAY RESULT IN HIGH LEVELS OF NOISE AND VIBRATION, ODORS, OR OTHER DISRUPTION TO OWNER OCCUPANCY WITH OWNER. NOTIFY OWNER NOT LESS THAN TWO DAYS IN ADVANCE OF PROPOSED DISRUPTIVE OPERATIONS. OBTAIN OWNER'S WRITTEN PERMISSION BEFORE PROCEEDING WITH DISRUPTIVE OPERATIONS.

E) USE OF TOBACCO PRODUCTS AND OTHER CONTROLLED SUBSTANCES ON PROJECT SITE IS NOT PERMITTED.

1.4 SPECIFICATION AND DRAWING CONVENTIONS

A) SPECIFICATION CONTENT: THE SPECIFICATIONS USE CERTAIN CONVENTIONS FOR THE STYLE OF LANGUAGE AND THE INTENDED MEANING OF CERTAIN TERMS, WORDS, AND PHRASES WHEN USED IN PARTICULAR SITUATIONS. THESE CONVENTIONS ARE AS FOLLOWS:

1) IMPERATIVE MOOD AND STREAMLINED LANGUAGE ARE GENERALLY USED IN THE SPECIFICATIONS. THE WORDS "SHALL," "SHALL BE," OR "SHALL COMPLY WITH," DEPENDING ON THE CONTEXT, ARE IMPLIED WHERE A COLON (:) IS USED WITHIN A SENTENCE OR PHRASE.

2) SPECIFICATION REQUIREMENTS ARE TO BE PERFORMED BY CONTRACTOR UNLESS SPECIFICALLY STATED OTHERWISE.

B) DRAWING COORDINATION: REQUIREMENTS FOR MATERIALS AND PRODUCTS IDENTIFIED ON DRAWINGS ARE DESCRIBED IN DETAIL IN THE SPECIFICATIONS. ONE OR MORE OF THE FOLLOWING ARE USED ON DRAWINGS TO IDENTIFY MATERIALS AND PRODUCTS:

1) TERMINOLOGY: MATERIALS AND PRODUCTS ARE IDENTIFIED BY THE TYPICAL GENERIC TERMS USED IN THE INDIVIDUAL SPECIFICATIONS SECTIONS.

2) ABBREVIATIONS: MATERIALS AND PRODUCTS ARE IDENTIFIED BY ABBREVIATIONS SCHEDULED ON DRAWINGS.

END OF SECTION 011000

SECTION 012500 - SUBSTITUTION PROCEDURES

2.1 1.1 SUBSTITUTIONS

A) SUBSTITUTIONS FOR CAUSE: SUBMIT REQUESTS FOR SUBSTITUTION IMMEDIATELY ON DISCOVERY OF NEED FOR CHANGE, BUT NOT LATER THAN 15 DAYS PRIOR TO TIME REQUIRED FOR PREPARATION AND REVIEW OF RELATED SUBMITTALS.
1) CONDITIONS: ARCHITECT WILL CONSIDER CONTRACTOR'S REQUEST FOR SUBSTITUTION WHEN THE FOLLOWING CONDITIONS ARE SATISFIED:

a) REQUESTED SUBSTITUTION IS CONSISTENT WITH THE CONTRACT DOCUMENTS AND WILL PRODUCE INDICATED RESULTS.

b) REQUESTED SUBSTITUTION WILL NOT ADVERSELY AFFECT CONTRACTOR'S CONSTRUCTION SCHEDULE.

c) REQUESTED SUBSTITUTION HAS RECEIVED NECESSARY APPROVALS OF AUTHORITIES HAVING JURISDICTION.

d) REQUESTED SUBSTITUTION IS COMPATIBLE WITH OTHER PORTIONS OF THE WORK.

e) REQUESTED SUBSTITUTION HAS BEEN COORDINATED WITH OTHER PORTIONS OF THE WORK.

f) REQUESTED SUBSTITUTION PROVIDES SPECIFIED WARRANTY.

g) IF REQUESTED SUBSTITUTION INVOLVES MORE THAN ONE CONTRACTOR, REQUESTED SUBSTITUTION HAS BEEN COORDINATED WITH OTHER PORTIONS OF THE WORK, IS UNIFORM AND CONSISTENT, IS COMPATIBLE WITH OTHER PRODUCTS, AND IS ACCEPTABLE TO ALL CONTRACTORS INVOLVED.

B) SUBSTITUTIONS FOR CONVENIENCE: NOT ALLOWED.

END OF SECTION 012500

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

1.1 REQUESTS FOR INFORMATION (RFIS)

A) IMMEDIATELY ON DISCOVERY OF THE NEED FOR ADDITIONAL INFORMATION OR INTERPRETATION OF THE CONTRACT DOCUMENTS, CONTRACTOR SHALL PREPARE AND SUBMIT AN RFI IN A FORM ACCEPTABLE TO ARCHITECT.

1) ARCHITECT WILL RETURN RFIS SUBMITTED TO ARCHITECT BY OTHER ENTITIES CONTROLLED BY CONTRACTOR WITH NO RESPONSE.

2) CONTENT OF THE RFI: PROJECT IDENTIFICATION; SEQUENTIAL RFI NUMBER; INCLUDE A DETAILED, LEGIBLE DESCRIPTION OF ITEM NEEDING INFORMATION OR INTERPRETATION; INCLUDE SKETCHES, MEASUREMENTS, PHOTOS, PRODUCT DATA, SHOP DRAWINGS, COORDINATION DRAWINGS, AND OTHER INFORMATION NECESSARY TO FULLY DESCRIBE ITEMS NEEDING INTERPRETATION; CONTRACTOR'S SUGGESTED RESOLUTION WITH ANY IMPACTS TO THE CONTRACT TIME OR THE CONTRACT SUM.

3) ARCHITECT WILL REVIEW EACH RFI, DETERMINE ACTION REQUIRED, AND RESPOND. ALLOW SEVEN BUSINESS DAYS FOR ARCHITECT'S RESPONSE FOR EACH RFI. RFIS RECEIVED BY ARCHITECT AFTER 1:00 P.M. WILL BE CONSIDERED AS RECEIVED THE FOLLOWING WORKING DAY.

4) THE FOLLOWING RFIS WILL BE RETURNED WITHOUT ACTION: REQUESTS FOR APPROVAL OF SUBSTITUTIONS; REQUESTS FOR APPROVAL OF SUBSTITUTIONS; REQUESTS FOR COORDINATION INFORMATION ALREADY INDICATED IN THE CONTRACT DOCUMENTS; REQUESTS FOR ADJUSTMENTS IN THE CONTRACT TIME OR THE CONTRACT SUM; REQUESTS FOR INTERPRETATION OF ARCHITECT'S ACTIONS ON SUBMITTALS; INCOMPLETE RFIS OR INACCURATELY PREPARED RFIS.

5) ARCHITECT'S ACTION ON RFIS THAT MAY RESULT IN A CHANGE TO THE CONTRACT TIME OR THE CONTRACT SUM MAY BE ELIGIBLE FOR CONTRACTOR TO SUBMIT A CHANGE PROPOSAL. IF CONTRACTOR BELIEVES THE RFI RESPONSE WARRANTS CHANGE IN THE CONTRACT TIME OR THE CONTRACT SUM, NOTIFY ARCHITECT IN WRITING WITHIN 10 CALENDAR DAYS OF RECEIPT OF THE RFI RESPONSE.

1.3 PROJECT WEB SITE

A) PROJECT MANAGEMENT SOFTWARE: USE ARCHITECT'S PROJECT WEB SITE (NEWFORMA INFO EXCHANGE "NIX") FOR PURPOSES OF MANAGING PROJECT COMMUNICATION AND DOCUMENTATION UNTIL FINAL COMPLETION. CONTRACTOR, SUBCONTRACTORS, AND OTHER PARTIES GRANTED ACCESS BY ARCHITECT TO PROJECT WEB SITE SHALL EXECUTE A DATA LICENSING AGREEMENT ACCEPTABLE TO OWNER AND ARCHITECT.

1.4 PROJECT MEETINGS

A) CONTRACTOR WILL CONDUCT ONE TO TWO PROGRESS MEETINGS EACH MONTH DURING CONSTRUCTION. CONTRACTOR WILL NOTIFY REQUIRED ATTENDEES, PREPARE THE MEETING AGENDA AND RECORD AND DISTRIBUTE MEETING MINUTES.

1.5 COORDINATION

A) COORDINATION: COORDINATE CONSTRUCTION OPERATIONS INCLUDED IN DIFFERENT SECTIONS OF THE SPECIFICATIONS TO ENSURE EFFICIENT AND ORDERLY INSTALLATION OF EACH PART OF THE WORK. COORDINATE CONSTRUCTION OPERATIONS INCLUDED IN DIFFERENT SECTIONS THAT DEPEND ON EACH OTHER FOR PROPER INSTALLATION, CONNECTION, AND OPERATION.

1) SCHEDULE CONSTRUCTION OPERATIONS IN SEQUENCE REQUIRED TO OBTAIN THE BEST RESULTS, WHERE INSTALLATION OF ONE PART OF THE WORK DEPENDS ON INSTALLATION OF OTHER COMPONENTS, BEFORE OR AFTER ITS OWN INSTALLATION

2) COORDINATE INSTALLATION OF DIFFERENT COMPONENTS TO ENSURE MAXIMUM PERFORMANCE AND ACCESSIBILITY FOR REQUIRED MAINTENANCE, SERVICE, AND REPAIR.

END OF SECTION 013100

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

3.1 CONSTRUCTION PHOTOGRAPHS

A) PRECONSTRUCTION PHOTOGRAPHS: BEFORE COMMENCEMENT OF EXCAVATION, COMMENCEMENT OF DEMOLITION AND STARTING CONSTRUCTION, TAKE PHOTOGRAPHS OF PROJECT SITE AND SURROUNDING PROPERTIES, INCLUDING EXISTING ITEMS TO REMAIN DURING CONSTRUCTION, FROM DIFFERENT VANTAGE POINTS. MAINTAIN KEY PLAN THAT IDENTIFIES EACH PHOTOGRAPHIC LOCATION. TAKE 20 MINIMUM PHOTOGRAPHS TO SHOW EXISTING CONDITIONS ADJACENT TO PROPERTY BEFORE STARTING THE WORK. TAKE PHOTOGRAPHS OF EXISTING BUILDINGS EITHER ON OR ADJOINING PROPERTY TO ACCURATELY RECORD PHYSICAL CONDITIONS AT START OF CONSTRUCTION.

B) PERIODIC CONSTRUCTION PHOTOGRAPHS: TAKE 10 MINIMUM PHOTOGRAPHS WEEKLY, WITH TIMING EACH MONTH ADJUSTED TO COINCIDE WITH THE CUTOFF DATE ASSOCIATED WITH EACH APPLICATION FOR PAYMENT.

END OF SECTION 012500

SECTION 013300 - SUBMITTAL PROCEDURES

1.1 ACTION SUBMITTALS

A) SUBMITTAL SCHEDULE: SUBMIT A SCHEDULE OF SUBMITTALS, ARRANGED IN CHRONOLOGICAL ORDER BY DATES REQUIRED BY CONSTRUCTION SCHEDULE. INCLUDE TIME REQUIRED FOR REVIEW, ORDERING, MANUFACTURING, FABRICATION, AND DELIVERY WHEN ESTABLISHING DATES. INCLUDE ADDITIONAL TIME REQUIRED FOR MAKING CORRECTIONS OR REVISIONS TO SUBMITTALS NOTED BY ARCHITECT AND ADDITIONAL TIME FOR HANDLING AND REVIEWING SUBMITTALS REQUIRED BY THOSE CORRECTIONS.

1.2 REQUIRED SUBMITTALS

A) SHOP DRAWINGS

1) 042000 – UNIT MASONRY – MASONRY UNITS: SHOW SIZES, PROFILES, COURSING AND LOCATIONS OF SPECIAL SHAPES

2) 044200 – EXTERIOR STONE CLADDING - SHOW FABRICATION AND INSTALLATION DETAILS FOR STONE CLADDING ASSEMBLY, INCLUDING DIMENSIONS AND PROFILES OF STONE UNITS

3) 057300 – DECORATIVE METAL RAILINGS – INCLUDE PLANS, ELEVATIONS, SECTIONS AND ATTACHMENT DETAILS

4) 076200 – SHEET METAL FLASHING AND TRIM – INCLUDE PLANS, ELEVATIONS, SECTIONS, AND ATTACHMENT DETAILS. PROVIDE DETAILS FOR FORMING, PROFILES AND SUPPORTS/FASTENERS.

5) 087100 – DOOR HARDWARE – ELECTRICAL WIRING DIAGRAM

B) PRODUCT DATA – FOR EACH TYPE OF PRODUCT

1) 042000 – UNIT MASONRY

2) 044200 – EXTERIOR STONE CLADDING

3) 057300 – DECORATIVE METAL HANDRAILS

4) 076200 – JOINT SEALANTS

5) 087100 - DOOR HARDWARE

C) SAMPLES
1) 042000 – UNIT MASONRY – BRICK AND MORTAR

2) 044200 – EXTERIOR STONE CLADDING – STONE INCLUDING PROFILES AND MORTAR

3) 057300 – FOR EACH TYPE OF EXPOSED FINISH AND PROFILES

4) 076200 – JOINT SEALANTS

5) 099113 – EXTERIOR PAINTING

D) DELEGATED DESIGN
1) FOR INSTALLED PRODUCTS INDICATED TO COMPLY WITH PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.
a) 044200 – EXTERIOR STONE CLADDING

b) 057300 – DECORATIVE METAL HANDRAILS

1.3 SUBMITTAL PROCEDURES

A. GENERAL SUBMITTAL PROCEDURE REQUIREMENTS:

1. SUBMIT ELECTRONIC SUBMITTALS VIA WEB-BASED PROJECT MANAGEMENT SOFTWARE WEBSITE AS PDF ELECTRONIC FILES.

a. ARCHITECT WILL RETURN ANNOTATED FILE. ANNOTATE AND RETAIN ONE COPY OF FILE AS AN ELECTRONIC PROJECT RECORD DOCUMENT FILE.

1.4 REVIEW AND ACTION

A) CONTRACTOR'S REVIEW – REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. NOTE CORRECTIONS AND FIELD DIMENSIONS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO ARCHITECT.

B) ARCHITECT RESERVES THE RIGHT TO WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL RELATED SUBMITTALS ARE RECEIVED.

C) PROCESSING TIME: REVIEW TIME COMMENCES ON ARCHITECT'S RECEIPT OF SUBMITTAL. ALLOW 15 BUSINESS DAYS FOR INITIAL REVIEW OF EACH SUBMITTAL. ALLOW ADDITIONAL TIME IF COORDINATION WITH SUBSEQUENT SUBMITTALS IS REQUIRED. ALLOW 15 BUSINESS DAYS FOR REVIEW OF EACH RESUBMITTAL.

D) MAKE ALL SUBMITTALS ELECTRONICALLY VIA WEB-BASED PROJECT MANAGEMENT SOFTWARE (NEWFORMA INFO EXCHANGE "NIX") UNLESS OTHERWISE AGREED TO WITH OWNER AND ARCHITECT. ASSEMBLE A COMPLETE PDF ELECTRONIC FILE SUBMITTAL PACKAGE INCLUDING BUT NOT LIMITED TO PRODUCT DATA AND SHOP DRAWINGS. INCLUDE PROJECT IDENTIFICATION INFORMATION, CONTRACTOR'S REVIEW STAMP AND A UNIQUE, CONSECUTIVE SUBMITTAL NUMBER. ARCHITECT WILL NOT REVIEW INCOMPLETE SUBMITTALS AND THOSE THAT DO NOT BEAR CONTRACTOR'S APPROVAL STAMP AND WILL RETURN THEM WITHOUT ACTION. IDENTIFY ALL OPTIONS REQUIRING SELECTION BY ARCHITECT.

1.5 SUBMITTAL REQUIREMENTS

A) PRODUCT DATA: COLLECT INFORMATION INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION AND TYPE OF PRODUCT OR EQUIPMENT.

B) SHOP DRAWINGS: PREPARE PROJECT-SPECIFIC INFORMATION, DRAWN ACCURATELY TO SCALE. DO NOT BASE SHOP DRAWINGS ON REPRODUCTIONS OF THE CONTRACT DOCUMENTS OR STANDARD PRINTED DATA.

C) SAMPLES: SUBMIT SAMPLES FOR REVIEW OF TYPE, COLOR, PATTERN, AND TEXTURE FOR A CHECK OF THESE CHARACTERISTICS WITH OTHER MATERIALS.

END OF SECTION 013300

SECTION 015000 – TEMPORARY FACILITIES

1.1 INFORMATION SUBMITTALS

A) SITE UTILIZATION PLAN: SHOW TEMPORARY FACILITIES, TEMPORARY UTILITY LINES AND CONNECTIONS, STAGING AREAS, CONSTRUCTION SITE ENTRANCES, VEHICLE CIRCULATION, AND PARKING AREAS FOR CONSTRUCTION PERSONNEL. REVIEW WITH OWNER.

1.2 TEMPORARY FACILITIES

A) FIELD OFFICE: COORDINATE WITH OWNER ON USE O OF ON-SITE ROOM FOR FIELD OFFICE OR LOCATION OF GC TRAILER. ALL TEMPORARY FACILITIES USE CHARGES BY GC.

B) INSTALL TEMPORARY SERVICE OR CONNECT TO EXISTING SERVICE AND ARRANGE WITH UTILITY COMPANY AND OWNER FOR ANY SERVICE INTERRUPTIONS.

1.3 SUPPORT FACILITIES INSTALLATION

A) PARKING: COORDINATE WITH OWNER ON USE OF OWNER'S EXISTING PARKING FOR CONSTRUCTION PERSONNEL.

B) STORAGE AND STAGING: COORDINATE WITH OWNER ON LOCATION AND USE OF DESIGNED AREAS ON PROJECT SITE.

C) SANITARY FACILITIES: PROVIDE TEMPORARY TOILETS, WASH FACILITIES, AND DRINKING WATER FOR USE OF CONSTRUCTION PERSONNEL. COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION FOR TYPE, NUMBER, LOCATION, OPERATION, AND MAINTENANCE OF FIXTURES AND FACILITIES. COORDINATE WITH OWNER ON USE OF EXISTING TOILET FACILITIES OR LOCATION OF TEMPORARY SANITARY FACILITIES LOCATION.

D) PROVIDE POWER AND LIGHTING NEEDED FOR CONSTRUCTION OPERATIONS ON SITE.

1.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A) PROTECTION OF EXISTING FACILITIES: PROTECT EXISTING VEGETATION, EQUIPMENT, STRUCTURES, UTILITIES, AND OTHER IMPROVEMENTS AT PROJECT SITE AND ON ADJACENT PROPERTIES. EXCEPT THOSE INDICATED TO BE REMOVED OR ALTERED. REPAIR DAMAGE TO EXISTING FACILITIES.

B) ENVIRONMENTAL PROTECTION: PROVIDE PROTECTION, OPERATE TEMPORARY FACILITIES, AND CONDUCT CONSTRUCTION AS REQUIRED TO COMPLY WITH ENVIRONMENTAL REGULATIONS AND THAT MINIMIZE POSSIBLE AIR, WATERWAY, AND SUBSOIL CONTAMINATION OR POLLUTION OR OTHER UNDESIRABLE EFFECTS

C) TEMPORARY EROSION AND SEDIMENTATION CONTROL: COMPLY WITH REQUIREMENTS OF EPA CONSTRUCTION GENERAL PERMIT OR AUTHORITIES HAVING JURISDICTION, WHICHEVER IS MORE STRINGENT AND REQUIREMENTS SPECIFIED ON CIVIL DRAWINGS.

D) STORMWATER CONTROL: COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. PROVIDE BARRIERS IN AND AROUND EXCAVATIONS AND SUBGRADE CONSTRUCTION TO PREVENT FLOODING BY RUNOFF OF STORMWATER FROM HEAVY RAINS.

E) SITE ENCLOSURE FENCE: BEFORE CONSTRUCTION OPERATIONS BEGIN, FURNISH AND INSTALL SITE ENCLOSURE FENCE IN A MANNER THAT WILL PREVENT PEOPLE FROM EASILY ENTERING SITE EXCEPT BY ENTRANCE GATES. COORDINATE WITH OWNER ON LIMITS OF EXTENTS.

1.5 OPERATION AND REMOVAL

A) MAINTENANCE: MAINTAIN FACILITIES IN GOOD OPERATING CONDITION UNTIL REMOVAL.

B) TERMINATION AND REMOVAL: REMOVE EACH TEMPORARY FACILITY WHEN NEED FOR ITS SERVICE HAS ENDED. WHEN IT HAS BEEN REPLACED BY AUTHORIZED USE OF A PERMANENT FACILITY, OR NO LATER THAN SUBSTANTIAL COMPLETION. COMPLETE GR. IF NECESSARY, RESTORE PERMANENT CONSTRUCTION THAT MAY HAVE BEEN DELAYED BECAUSE OF INTERFERENCE WITH TEMPORARY FACILITY. REPAIR DAMAGED WORK. CLEAN EXPOSED SURFACES, AND REPLACE CONSTRUCTION THAT CANNOT BE SATISFACTORILY REPAIRED.

END OF SECTION 015000

SECTION 017300 - EXECUTION

1.1 PREINSTALLATION MEETINGS

A) CUTTING AND PATCHING CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.

1) PRIOR TO COMMENCING WORK REQUIRING CUTTING AND PATCHING, REVIEW EXTENT OF CUTTING AND PATCHING ANTICIPATED AND EXAMINE PROCEDURES FOR ENSURING SATISFACTORY RESULT FROM CUTTING AND PATCHING WORK.

B) LAYOUT CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.

1) PRIOR TO ESTABLISHING LAYOUT OF WORK, REVIEW BENCHMARK, CONTROL POINT, AND LAYOUT AND DIMENSION REQUIREMENTS

3.1 EXAMINATION

A) EXAMINATION AND ACCEPTANCE OF CONDITIONS: BEFORE PROCEEDING WITH EACH COMPONENT OF THE WORK, EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER OR APPLICATOR PRESENT WHERE INDICATED, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. RECORD OBSERVATIONS.

1) EXAMINE ROUGHING-IN FOR ELECTRICAL SYSTEMS TO VERIFY ACTUAL LOCATIONS OF CONNECTIONS BEFORE EQUIPMENT AND FIXTURE INSTALLATION.

2) EXAMINE WALLS AND FLOORS FOR SUITABLE CONDITIONS WHERE PRODUCTS AND SYSTEMS ARE TO BE INSTALLED.

3) VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY WITH EXISTING FINISHES OR PRIMERS.

B) PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

3.2 PREPARATION

A) FIELD MEASUREMENTS: TAKE FIELD MEASUREMENTS AS REQUIRED TO FIT THE WORK PROPERLY. RECHECK MEASUREMENTS BEFORE INSTALLING EACH PRODUCT. WHERE PORTIONS OF THE WORK ARE INDICATED TO FIT TO OTHER CONSTRUCTION, VERIFY DIMENSIONS OF OTHER CONSTRUCTION BY FIELD MEASUREMENTS BEFORE FABRICATION. COORDINATE FABRICATION SCHEDULE WITH CONSTRUCTION PROGRESS TO AVOID DELAYING THE WORK.

B) SPACE REQUIREMENTS: VERIFY SPACE REQUIREMENTS AND DIMENSIONS OF ITEMS SHOWN DIAGRAMMATICALLY ON DRAWINGS.

C) REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS: IMMEDIATELY ON DISCOVERY OF THE NEED FOR CLARIFICATION OF THE CONTRACT DOCUMENTS CAUSED BY DIFFERING FIELD CONDITIONS OUTSIDE THE CONTROL OF CONTRACTOR, SUBMIT A REQUEST FOR INFORMATION TO ARCHITECT ACCORDING TO REQUIREMENTS IN SECTION 013100 "PROJECT MANAGEMENT AND COORDINATION."

3.3 CONSTRUCTION LAYOUT

A) VERIFICATION: BEFORE PROCEEDING TO LAY OUT THE WORK, VERIFY LAYOUT INFORMATION SHOWN ON DRAWINGS AND EXISTING BENCHMARKS. IF DISCREPANCIES ARE DISCOVERED, NOTIFY ARCHITECT PROMPTLY.

3.4 INSTALLATION

A) GENERAL: LOCATE THE WORK AND COMPONENTS OF THE WORK ACCURATELY, IN CORRECT ALIGNMENT AND ELEVATION, AS INDICATED.

1) MAKE VERTICAL WORK PLUMB AND MAKE HORIZONTAL WORK LEVEL.

2) WHERE SPACE IS LIMITED, INSTALL COMPONENTS TO MAXIMIZE SPACE AVAILABLE FOR MAINTENANCE AND EASE OF REMOVAL FOR REPLACEMENT.

3) CONCEAL CONDUITS AND WIRING IN FINISHED AREAS UNLESS OTHERWISE INDICATED.

B) COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.

C) INSTALL PRODUCTS AT THE TIME AND UNDER CONDITIONS THAT WILL ENSURE THE BEST POSSIBLE RESULTS. MAINTAIN CONDITIONS REQUIRED FOR PRODUCT PERFORMANCE UNTIL SUBSTANTIAL COMPLETION.

D) CONDUCT CONSTRUCTION OPERATIONS SO NO PART OF THE WORK IS SUBJECTED TO DAMAGING OPERATIONS OR LOADING IN EXCESS OF THAT EXPECTED DURING NORMAL CONDITIONS OF OCCUPANCY.

E) SEQUENCE THE WORK AND ALLOW ADEQUATE CLEARANCES TO ACCOMMODATE MOVEMENT OF CONSTRUCTION ITEMS ON SITE AND PLACEMENT IN PERMANENT LOCATIONS.

F) TOOLS AND EQUIPMENT: DO NOT USE TOOLS OR EQUIPMENT THAT PRODUCE HARMFUL NOISE LEVELS.

G) TEMPLATES: OBTAIN AND DISTRIBUTE TO THE PARTIES INVOLVED TEMPLATES FOR WORK SPECIFIED TO BE FACTORY PREPARED AND FIELD INSTALLED. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING PRODUCTS TO COMPLY WITH INDICATED REQUIREMENTS.

H) ATTACHMENT: PROVIDE BLOCKING AND ATTACHMENT PLATES AND ANCHORS AND FASTENERS OF ADEQUATE SIZE AND NUMBER TO SECURELY ANCHOR EACH COMPONENT IN PLACE, ACCURATELY LOCATED AND ALIGNED WITH OTHER PORTIONS OF THE WORK. WHERE SIZE AND TYPE OF ATTACHMENTS ARE NOT INDICATED, VERIFY SIZE AND TYPE REQUIRED FOR LOAD CONDITIONS.

1) MOUNTING HEIGHTS: WHERE MOUNTING HEIGHTS ARE NOT INDICATED, MOUNT COMPONENTS AT HEIGHTS DIRECTED BY ARCHITECT.

2) ALLOW FOR BUILDING MOVEMENT, INCLUDING THERMAL EXPANSION AND CONTRACTION.

3) COORDINATE INSTALLATION OF ANCHORAGES. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS, THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.

I) JOINTS: MAKE JOINTS OF UNIFORM WIDTH. WHERE JOINT LOCATIONS IN EXPOSED WORK ARE NOT INDICATED, ARRANGE JOINTS FOR THE BEST VISUAL EFFECT. FIT EXPOSED CONNECTIONS TOGETHER TO FORM HAIRLINE JOINTS.

J) HAZARDOUS MATERIALS: USE PRODUCTS, CLEANERS, AND INSTALLATION MATERIALS THAT ARE NOT CONSIDERED HAZARDOUS.

3.5 CUTTING AND PATCHING

A) CUTTING AND PATCHING, GENERAL: EMPLOY SKILLED WORKERS TO PERFORM CUTTING AND PATCHING. PROCEED WITH CUTTING AND PATCHING AT THE EARLIEST FEASIBLE TIME, AND COMPLETE WITHOUT DELAY.

1) CUT IN PLACE CONSTRUCTION TO PROVIDE FOR INSTALLATION OF OTHER COMPONENTS OR PERFORMANCE OF OTHER CONSTRUCTION, AND SUBSEQUENTLY PATCH AS REQUIRED TO RESTORE SURFACES TO THEIR ORIGINAL CONDITION.

B) EXISTING WARRANTIES: REMOVE, REPLACE, PATCH, AND REPAIR MATERIALS AND SURFACES CUT OR DAMAGED DURING INSTALLATION OR CUTTING AND PATCHING OPERATIONS, BY METHODS AND WITH MATERIALS SO AS NOT TO VOID EXISTING WARRANTIES.

C) TEMPORARY SUPPORT: PROVIDE TEMPORARY SUPPORT OF WORK TO BE CUT.

D) PROTECTION: PROTECT IN-PLACE CONSTRUCTION DURING CUTTING AND PATCHING TO PREVENT DAMAGE. PROVIDE PROTECTION FROM ADVERSE WEATHER CONDITIONS FOR PORTIONS OF PROJECT THAT MIGHT BE EXPOSED DURING CUTTING AND PATCHING OPERATIONS.

E) ADJACENT OCCUPIED AREAS: AVOID INTERFERENCE WITH USE OF ADJOINING AREAS OR INTERRUPTION OF FREE PASSAGE TO ADJOINING AREAS.

F) EXISTING UTILITY SERVICES AND ELECTRICAL SYSTEMS: WHERE EXISTING SERVICES/SYSTEMS ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, BYPASS SUCH SERVICES/SYSTEMS BEFORE CUTTING TO MINIMIZE INTERRUPTION TO OCCUPIED AREAS.

G) CUTTING: CUT IN-PLACE CONSTRUCTION BY SAWING, DRILLING, BREAKING, CHIPPING, GRINDING, AND SIMILAR OPERATIONS, INCLUDING EXCAVATION, USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS RETAINED OR ADJOINING CONSTRUCTION. IF POSSIBLE, REVIEW PROPOSED PROCEDURES WITH ORIGINAL INSTALLER; COMPLY WITH ORIGINAL INSTALLER'S WRITTEN RECOMMENDATIONS.

1) IN GENERAL, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING AND GRINDING, NOT HAMMERING AND CHOPPING. CUT HOLES AND SLOTS NEATLY TO MINIMUM SIZE REQUIRED, AND WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE.

2) FINISHED SURFACES: CUT OR DRILL FROM THE EXPOSED OR FINISHED SIDE INTO CONCEALED SURFACES.

3) CONCRETE AND MASONRY: CUT USING A CUTTING MACHINE, SUCH AS AN ABRASIVE SAW OR A DIAMOND-CORE DRILL.

4) MECHANICAL AND ELECTRICAL SERVICES: CUT OFF PIPE OR CONDUIT IN WALLS OR PARTITIONS TO BE REMOVED. CAP, VALVE, OR PLUG AND SEAL REMAINING PORTION OF PIPE OR CONDUIT TO PREVENT ENTRANCE OF MOISTURE AND OTHER FOREIGN MATTER AFTER CUTTING.

5) PROCEED WITH PATCHING AFTER CONSTRUCT

2.4 MORTAR AND GROUT MATERIALS

A) MORTAR COLOR TO MATCH EXISTING. PROVIDE COLOR SAMPLES TO REVIEW ON SITE WITH OWNER.

B) PORTLAND CEMENT: ASTM C150/C150M, TYPE I OR II, EXCEPT TYPE III MAY BE USED FOR COLD-WEATHER CONSTRUCTION. PROVIDE NATURAL COLOR OR WHITE CEMENT AS REQUIRED TO PRODUCE MORTAR COLOR INDICATED.

1) ALKALI CONTENT SHALL NOT BE MORE THAN 0.1 PERCENT WHEN TESTED ACCORDING TO ASTM C114.

C) HYDRATED LIME: ASTM C207, TYPE S.

D) PORTLAND CEMENT-LIME MIX: PACKAGED BLEND OF PORTLAND CEMENT AND HYDRATED LIME CONTAINING NO OTHER INGREDIENTS.

E) MASONRY CEMENT: ASTM C91/C91M.

F) MORTAR PIGMENTS: NATURAL AND SYNTHETIC IRON OXIDES AND CHROMIUM OXIDES, COMPOUNDED FOR USE IN MORTAR MIXES AND COMPLYING WITH ASTM C979/C979M. USE ONLY PIGMENTS WITH A RECORD OF SATISFACTORY PERFORMANCE IN MASONRY MORTAR.

G) AGGREGATE FOR MORTAR: ASTM C144.

1) FOR MORTAR THAT IS EXPOSED TO VIEW, USE WASHED AGGREGATE CONSISTING OF NATURAL SAND OR CRUSHED STONE.
2) FOR JOINTS LESS THAN 1/4 INCH THICK, USE AGGREGATE GRADED WITH 100 PERCENT PASSING THE NO. 16 SIEVE.
3) WHITE-MORTAR AGGREGATES: NATURAL WHITE SAND OR CRUSHED WHITE STONE.
4) COLORED-MORTAR AGGREGATES: NATURAL SAND OR CRUSHED STONE OF COLOR NECESSARY TO PRODUCE REQUIRED MORTAR COLOR.

H) AGGREGATE FOR GROUT: ASTM C404.

I) COLD-WEATHER ADMIXTURE: NONCHLORIDE, NONCORROSIVE, ACCELERATING ADMIXTURE COMPLYING WITH ASTM C 494/C 494M, TYPE C, AND RECOMMENDED BY MANUFACTURER FOR USE IN MASONRY MORTAR OF COMPOSITION INDICATED.

1) BASF CORPORATION; CONSTRUCTION SYSTEMS.
2) EUCLID CHEMICAL COMPANY (AN RPM COMPANY).
3) GCP APPLIED TECHNOLOGIES.

J) WATER: POTABLE.

2.5 REINFORCEMENT

A) UNCOATED-STEEL REINFORCING BARS: ASTM A 615/A 615M OR ASTM A 996/A 996 M, GRADE 60.

B) REINFORCING BAR POSITIONERS: WIRE UNITS DESIGNED TO FIT INTO MORTAR BED JOINTS SPANNING MASONRY UNIT CELLS AND TO HOLD REINFORCING BARS IN CENTER OF CELLS. UNITS ARE FORMED FROM 0.145-INCH STEEL WIRE, HOT-DIP GALVANIZED AFTER FABRICATION. PROVIDE UNITS DESIGNED FOR NUMBER OF BARS INDICATED.

1) MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

a) DUR-O-WAL; A HOHMANN & BARNARD COMPANY.
b) HECKMANN BUILDING PRODUCTS.
c) HOHMANN & BARNARD COMPANY.
d) LOCK-RITE.
e) WIRE-BOND.

C) MASONRY-JOINT REINFORCEMENT, GENERAL: ASTM A 951/A 951 M.

1) EXTERIOR WALLS: HOT-DIP GALVANIZED CARBON STEEL.
2) WIRE SIZE FOR SIDE RODS: 0.187-INCH DIAMETER.
3) WIRE SIZE FOR CROSS RODS: 0.148-INCH DIAMETER.
4) WIRE SIZE FOR TIES: 0.187-INCH DIAMETER.
5) SPACING OF CROSS RODS, TABS, AND CROSS TIES: NOT MORE THAN 16 INCHES OC.
6) PROVIDE IN LENGTHS OF NOT LESS THAN 10 FEET, WITH PREFABRICATED CORNER AND TEE UNITS.

D) MASONRY-JOINT REINFORCEMENT FOR MULTIWYTHE MASONRY:

1) LADDER TYPE WITH ONE SIDE ROD AT EACH FACE SHELL OF HOLLOW MASONRY UNITS MORE THAN 4 INCHES WIDE. PLUS ONE SIDE ROD AT EACH WYTHE OF MASONRY 4 INCHES WIDE OR LESS.

2.6 MASONRY CLEANERS

A) PROPRIETARY ACIDIC CLEANER: MANUFACTURER'S STANDARD-STRENGTH CLEANER DESIGNED FOR REMOVING MORTAR/GROUT STAINS, EFFLORESCENCE, AND OTHER NEW CONSTRUCTION STAINS FROM NEW MASONRY WITHOUT DISCOLORING OR DAMAGING MASONRY SURFACES. USE PRODUCT EXPRESSLY APPROVED FOR INTENDED USE BY CLEANER MANUFACTURER AND MANUFACTURER OF MASONRY UNITS BEING CLEANED.

2.7 MORTAR AND GROUT MIXES

A) GENERAL: DO NOT USE ADMIXTURES, INCLUDING PIGMENTS, AIR-ENTRAINING AGENTS, ACCELERATORS, RETARDERS, WATER-REPELLENT AGENTS, ANTIFREEZE COMPOUNDS, OR OTHER ADMIXTURES UNLESS OTHERWISE INDICATED.

1) DO NOT USE CALCIUM CHLORIDE IN MORTAR OR GROUT.
2) USE PORTLAND CEMENT-LIME MORTAR UNLESS OTHERWISE INDICATED.
3) ADD COLD-WEATHER ADMIXTURE (IF USED) AT SAME RATE FOR ALL MORTAR THAT WILL BE EXPOSED TO VIEW, REGARDLESS OF WEATHER CONDITIONS, TO ENSURE THAT MORTAR COLOR IS CONSISTENT.

B) PREBLENDED, DRY MORTAR MIX: FURNISH DRY MORTAR INGREDIENTS IN FORM OF A PREBLENDED MIX, MEASURE QUANTITIES BY WEIGHT TO ENSURE ACCURATE PROPORTIONS, AND THOROUGHLY BLEND INGREDIENTS BEFORE DELIVERING TO PROJECT SITE.

C) MORTAR FOR UNIT MASONRY, COMPLY WITH ASTM C270, PROPORTION SPECIFICATION. PROVIDE THE FOLLOWING TYPES OF MORTAR FOR APPLICATIONS STATED UNLESS ANOTHER TYPE IS INDICATED OR NEEDED TO PROVIDE REQUIRED COMPRESSIVE STRENGTH OF MASONRY.

1) TYPE S.

D) PIGMENTED MORTAR: USE COLORED CEMENT PRODUCT OR SELECT AND PROPORTION PIGMENTS WITH OTHER INGREDIENTS TO PRODUCE COLOR REQUIRED. DO NOT ADD PIGMENTS TO COLORED CEMENT PRODUCTS.

1) PIGMENTS SHALL NOT EXCEED 10 PERCENT OF PORTLAND CEMENT BY WEIGHT.
2) PIGMENTS SHALL NOT EXCEED 5 PERCENT OF MASONRY CEMENT OR MORTAR CEMENT BY WEIGHT.
3) MIX TO MATCH EXISTING MORTAR.
4) APPLICATION: USE PIGMENTED MORTAR FOR EXPOSED MORTAR JOINTS WITH THE FOLLOWING UNITS:

a) CLAY FACE BRICK.
b) GROUT FOR UNIT MASONRY: COMPLY WITH ASTM C476.

E) GROUT FOR UNIT MASONRY: COMPLY WITH ASTM C 476.

1) USE GROUT OF TYPE INDICATED OR, IF NOT OTHERWISE INDICATED, OF TYPE (FINE OR COARSE) THAT WILL COMPLY WITH TMS 602/ACI 530.1/ASCE 6 FOR DIMENSIONS OF GROUT SPACES AND POUR HEIGHT.
2) PROPORTION GROUT IN ACCORDANCE WITH ASTM C 476, TABLE 1.
3) PROVIDE GROUT WITH A SLUMP OF 8 TO 11 INCHES AS MEASURED ACCORDING TO ASTM C 143/C 143M.

PART 3 – EXECUTION

3.1 EXAMINATION

A) EXAMINE CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.

1) FOR THE RECORD, PREPARE WRITTEN REPORT, ENDORSED BY INSTALLER, LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK.
2) VERIFY THAT FOUNDATIONS ARE WITHIN TOLERANCES SPECIFIED.

B) PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 INSTALLATION, GENERAL

A) THICKNESS: BUILD WALLS AND OTHER MASONRY CONSTRUCTION TO FULL THICKNESS SHOWN.

B) USE FULL-SIZE UNITS WITHOUT CUTTING IF POSSIBLE. IF CUTTING IS REQUIRED TO PROVIDE A CONTINUOUS PATTERN OR TO FIT ADJOINING CONSTRUCTION, BUT UNITS WITH MOTOR-DRIVEN SAWS; PROVIDE CLEAN, SHARP, UNCHIPPED EDGES. ALLOW UNITS TO DRY BEFORE LAYING UNLESS WETTING OF UNITS IS SPECIFIED. INSTALL CUT UNITS WITH CUT SURFACES AND, WHERE POSSIBLE, CUT EDGES CONCEALED.

C) SELECT AND ARRANGE UNITS FOR EXPOSED UNIT MASONRY TO PRODUCE A UNIFORM BLEND OF COLORS AND TEXTURES. MIX UNITS FROM SEVERAL PALLETS OR CUBES AS THEY ARE PLACED.

D) MATCHING EXISTING MASONRY: MATCH COURSING, BONDING, COLOR, AND TEXTURE OF EXISTING MASONRY.

E) WETTING OF BRICK: WET BRICK BEFORE LAYING IF INITIAL RATE OF ABSORPTION EXCEEDS 30 G/30 SQ. IN. PER MINUTE WHEN TESTED ACCORDING TO ASTM C67. ALLOW UNITS TO ABSORB WATER SO THEY ARE DAMP BUT NOT WET AT TIME OF LAYING.

3.3 LAYING MASONRY WALLS

A) LAY OUT WALLS IN ADVANCE FOR ACCURATE SPACING OF SURFACE BOND PATTERNS WITH UNIFORM JOINT THICKNESSES AND FOR ACCURATE LOCATION OF OPENINGS, MOVEMENT-TYPE JOINTS, RETURNS, AND OFFSETS. AVOID USING LESS-THAN-HALF-SIZE UNITS, PARTICULARLY AT CORNERS, JAMBS, AND, WHERE POSSIBLE, AT OTHER LOCATIONS.

B) BOND PATTERN FOR EXPOSED MASONRY: UNLESS OTHERWISE INDICATED, LAY EXPOSED MASONRY IN THE SAME PATTERN AS THE ADJOINING, ORIGINAL BRICK. DO NOT USE UNITS WITH LESS-THAN-NOMINAL 4-INCH HORIZONTAL FACE DIMENSIONS AT CORNERS OR JAMBS.

C) LAY CONCEALED MASONRY WITH ALL UNITS IN A WYTHE IN RUNNING BOND. BOND AND INTERLOCK EACH COURSE OF EACH WYTHE AT CORNERS. DO NOT USE UNITS WITH LESS-THAN-NOMINAL 4-INCH HORIZONTAL FACE DIMENSIONS AT CORNERS AND JAMBS.

D) STOPPING AND RESUMING WORK: STOP WORK BY STEPPING BACK UNITS IN EACH COURSE FROM THOSE IN COURSE BELOW; DO NOT TOOTH. WHEN RESUMING WORK, CLEAN MASONRY SURFACES THAT ARE TO RECEIVE MORTAR, REMOVE LOOSE MASONRY UNITS AND MORTAR, AND WET BRICK IF REQUIRED BEFORE LAYING FRESH MASONRY.

3.4 MORTAR BEDDING AND JOINTING

A) LAY SOLID MASONRY UNITS WITH COMPLETELY FILLED BED AND HEAD JOINTS; BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. DO NOT DEEPLY FURROW BED JOINTS OR SLUSH HEAD JOINTS.

1) WET JOINT SURFACES THOROUGHLY BEFORE APPLYING MORTAR.
2) RAKE OUT MORTAR JOINTS FOR POINTING WITH SEALANT.

B) TOOL EXPOSED JOINTS TO MATCH ADJACENT, ORIGINAL BRICK JOINTS WHEN "THUMBPRINT" HARD, USING A JOINTER LARGER THAN JOINT THICKNESS UNLESS OTHERWISE INDICATED.

3.5 COMPOSITE MASONRY

A) BOND WYTHES OF COMPOSITE MASONRY TOGETHER AS FOLLOWS:

1) MASONRY-JOINT REINFORCEMENT: INSTALLED IN HORIZONTAL MORTAR JOINTS.

a) USE LADDER-TYPE REINFORCEMENT EXTENDING ACROSS BOTH WYTHES.

B) COLLAR JOINTS: SOLIDLY FILL COLLAR JOINTS BY PARGING FACE OF FIRST WYTHE THAT IS LAID AND SHOVING UNITS OF OTHER WYTHE INTO PLACE.

3.6 MASONRY-JOINT REINFORCEMENT

A) GENERAL: INSTALL ENTIRE LENGTH OF LONGITUDINAL SIDE RODS IN MORTAR WITH A MINIMUM COVER OF 5/8 INCH ON EXTERIOR SIDE OF WALL, 5/8 INCH ELSEWHERE. LAP REINFORCEMENT A MINIMUM OF 6 INCHES.

1) SPACE REINFORCEMENT NOT MORE THAN 16 INCHES OC.
2) SPACE REINFORCEMENT NOT MORE THAN 8 INCHES OC IN FOUNDATION WALLS AND PARAPET WALLS.
3) PROVIDE REINFORCEMENT NOT MORE THAN 8 INCHES ABOVE AND BELOW WALL OPENINGS AND EXTENDING 12 INCHES BEYOND OPENINGS IN ADDITION TO CONTINUOUS REINFORCEMENT.

3.7 FIELD QUALITY CONTROL

A) TESTING AND INSPECTING: OWNER WILL ENGAGE SPECIAL INSPECTORS TO PERFORM TESTS AND INSPECTIONS AND PREPARE REPORTS. ALLOW INSPECTORS ACCESS TO SCAFFOLDING AND WORK AREAS AS NEEDED TO PERFORM TESTS AND INSPECTIONS. RETESTING OF MATERIALS THAT FAIL TO COMPLY WITH SPECIFIED REQUIREMENTS SHALL BE DONE AT CONTRACTOR'S EXPENSE.

B) INSPECTIONS: SPECIAL INSPECTIONS ACCORDING TO LEVEL B IN TMS 402/ACI 530/ASCE 5.

1) BEGIN MASONRY CONSTRUCTION ONLY AFTER INSPECTORS HAVE VERIFIED PROPORTIONS OF SITE-PREPARED MORTAR.
2) PLACE GROUT ONLY AFTER INSPECTORS HAVE VERIFIED COMPLIANCE OF GROUT SPACES AND OF GRADES, SIZES, AND LOCATIONS OF REINFORCEMENT.
3) PLACE GROUT ONLY AFTER INSPECTORS HAVE VERIFIED PROPORTIONS OF SITE-PREPARED GROUT.

C) TESTING PRIOR TO CONSTRUCTION: ONE SET OF TESTS.

D) CLAY MASONRY UNIT TEST: FOR EACH TYPE OF UNIT PROVIDED, IN ACCORDANCE WITH ASTM C67/C67M FOR COMPRESSIVE STRENGTH.

E) MORTAR AGGREGATE RATIO TEST (PROPORTION SPECIFICATION): FOR EACH MIX PROVIDED, ACCORDING TO ASTM C780.

F) GROUT TEST (COMPRESSIVE STRENGTH): FOR EACH MIX PROVIDED, ACCORDING TO ASTM C1019.

G) THE OWNER'S INDEPENDENT TESTING/INSPECTION AGENCY SHALL INSPECT THE MASONRY CONSTRUCTION DURING VARIOUS WORK STAGES FOR COMPLIANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS, AND KEEP RECORDS WHICH COVER THE FOLLOWING:

1) QUALITY AND TESTING OF MASONRY UNITS.
2) PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT. LAYING, MORTARING, AND GROUTING OF MASONRY UNITS AND ELEMENTS.
3) CONDITION, GRADE, SIZE, SPACING AND PLACEMENT OF REINFORCEMENT.
4) WHEN AMBIENT TEMPERATURE FALLS BELOW 40 DEG F OR RISES ABOVE 100 DEG F, A COMPLETE RECORD OF WEATHER CONDITIONS AND PRECONDITIONING AND PROTECTION GIVEN TO MASONRY MATERIALS AND PROTECTION AND CURING OF COMPLETED WORK SHALL BE MAINTAINED.
5) INSPECTION RECORDS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER AND ARCHITECT/ENGINEER DURING PROGRESS OF THE WORK.
6) THE INSPECTOR SHALL NOT SUPERVISE THE CONSTRUCTION; HOWEVER, HE SHALL VISIT THE PROJECT WITH THE FREQUENCY NECESSARY TO OBSERVE THE VARIOUS STAGES OF WORK AND LONG ENOUGH AT EACH VISIT TO ASCERTAIN THAT IT IS BEING DONE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND CODE REQUIREMENTS. THE INSPECTOR SHALL BE PRESENT AS FREQUENTLY AS HE DEEMS NECESSARY TO JUDGE WHETHER THE QUALITY OF THE WORK COMPLIES WITH THE CONTRACT DOCUMENTS; TO SEE THAT MASONRY MATERIALS ARE OF THE CORRECT QUALITY AND PROPERLY INSTALLED, AND; TO SEE THAT TESTS FOR QUALITY CONTROL ARE BEING MADE AS SPECIFIED.

H) EVALUATION OF QUALITY CONTROL TESTS AND INSPECTIONS: IN ABSENCE OF OTHER INDICATIONS OF NONCOMPLIANCE WITH REQUIREMENTS, MASONRY WILL BE CONSIDERED SATISFACTORY IF RESULTS FROM CONSTRUCTION QUALITY CONTROL TESTS AND INSPECTIONS COMPLY WITH MINIMUM REQUIREMENTS INDICATED.

3.8 REPAIRING, POINTING, AND CLEANING

A) REMOVE AND REPLACE MASONRY UNITS THAT ARE LOOSE, CHIPPED, BROKEN, STAINED, OR OTHERWISE DAMAGED OR THAT DO NOT MATCH ADJOINING UNITS. INSTALL NEW UNITS TO MATCH ADJOINING UNITS; INSTALL IN FRESH MORTAR, POINTED TO ELIMINATE EVIDENCE OF REPLACEMENT.

B) POINTING: DURING THE TOOLING OF JOINTS, ENLARGE VOIDS AND HOLES, EXCEPT WEEP HOLES, AND COMPLETELY FILL WITH MORTAR. POINT UP JOINTS, INCLUDING CORNERS, OPENINGS, AND ADJACENT CONSTRUCTION, TO PROVIDE A NEAT, UNIFORM APPEARANCE. PREPARE JOINTS FOR SEALANT APPLICATION, WHERE INDICATED.

C) IN-PROGRESS CLEANING: CLEAN UNIT MASONRY AS WORK PROGRESSES BY DRY BRUSHING TO REMOVE MORTAR FINS AND SMEARS BEFORE TOOLING JOINTS.

D) FINAL CLEANING: AFTER MORTAR IS THOROUGHLY SET AND CURED, CLEAN EXPOSED MASONRY AS FOLLOWS:

1) REMOVE LARGE MORTAR PARTICLES BY HAND WITH WOODEN PADDLES AND NONMETALLIC SCRAPE HOES OR CHISELS.
2) WET WALL SURFACES WITH WATER BEFORE APPLYING CLEANERS; REMOVE CLEANERS PROMPTLY BY RINSING SURFACES THOROUGHLY WITH CLEAR WATER.
3) CLEAN MASONRY WITH A PROPRIETARY ACIDIC CLEANER APPLIED ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. TEST CLEANER ON BRICK AND MORTAR BEFORE APPLYING TO WALL.
4) CLEAN BRICK BY BUCKET-AND-BRUSH HAND-CLEANING METHOD DESCRIBED IN BIA TECHNICAL NOTES 20.
5) CLEAN CONCRETE MASONRY BY APPLICABLE CLEANING METHODS INDICATED IN NCMA TEK 8-4A.

3.9 MASONRY WASTE DISPOSAL

A) SALVAGEABLE MATERIALS: UNLESS OTHERWISE INDICATED, EXCESS MASONRY MATERIALS ARE CONTRACTOR'S PROPERTY. AT COMPLETION OF UNIT MASONRY WORK, REMOVE FROM PROJECT SITE.

B) MASONRY WASTE RECYCLING: RETURN BROKEN CMUS NOT USED AS FILL TO MANUFACTURER FOR RECYCLING.

C) EXCESS MASONRY WASTE: REMOVE EXCESS CLEAN MASONRY WASTE THAT CANNOT BE USED AS FILL, AS DESCRIBED ABOVE OR RECYCLED, AND OTHER MASONRY WASTE, AND LEGALLY DISPOSE OF OFF OWNER'S PROPERTY.

END OF SECTION 042000

SECTION 044200 - EXTERIOR STONE CLADDING

1.1 SUMMARY

A. SECTION INCLUDES:

1. STONE PANELS SET WITH INDIVIDUAL ANCHORS.
2. STONE TRIM UNITS, INCLUDING BANDS AND COPINGS.

1.2 PREINSTALLATION MEETINGS

A. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.

1.3 ACTION SUBMITTALS

A. DELEGATED DESIGN SUBMITTAL: FOR STONE CLADDING ASSEMBLY.

1.4 INFORMATIONAL SUBMITTALS

A. QUALIFICATION DATA: FOR INSTALLER AND FABRICATOR.

B. WELDING CERTIFICATES.

C. MATERIAL TEST REPORTS:

1. FOR METAL COMPONENTS, BY A QUALIFIED TESTING AGENCY, INDICATING CHEMICAL AND PHYSICAL PROPERTIES OF METAL.
2. SEALANT COMPATIBILITY AND ADHESION TEST REPORT: FROM SEALANT MANUFACTURER COMPLYING WITH REQUIREMENTS IN SECTION 079200 "JOINT SEALANTS" AND INDICATING THAT SEALANTS WILL NOT STAIN OR DAMAGE STONE. INCLUDE INTERPRETATION OF TEST RESULTS AND RECOMMENDATIONS FOR PRIMERS AND SUBSTRATE PREPARATION NEEDED FOR ADHESION.

D. COLD-WEATHER PROCEDURES: DETAILED DESCRIPTION OF METHODS, MATERIALS, AND EQUIPMENT TO BE USED TO COMPLY WITH COLD-WEATHER REQUIREMENTS.

1.5 QUALITY ASSURANCE

A. FABRICATOR QUALIFICATIONS: SHOP THAT EMPLOYS SKILLED WORKERS WHO CUSTOM FABRICATE STONE CLADDING ASSEMBLIES SIMILAR TO THAT REQUIRED FOR THIS PROJECT AND WHOSE PRODUCTS HAVE A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

B. INSTALLER QUALIFICATIONS: A FIRM OR INDIVIDUAL EXPERIENCED IN INSTALLING STONE CLADDING ASSEMBLIES SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, WHOSE WORK HAS A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

C. TESTING AGENCY QUALIFICATIONS: QUALIFIED ACCORDING TO ASTM E329 FOR TESTING INDICATED.

D. MOCKUPS: BUILD MOCKUPS TO VERIFY SELECTIONS MADE UNDER SAMPLE SUBMITTALS, TO DEMONSTRATE AESTHETIC EFFECTS, AND TO SET QUALITY STANDARDS FOR MATERIALS AND EXECUTION.

1. BUILD MOCKUPS OF TYPICAL EXTERIOR WALL AREA NOT LESS THAN 72 INCHES LONG BY 48 INCHES HIGH
   A. INCLUDE TYPICAL COMPONENTS, ATTACHMENTS TO BUILDING STRUCTURE, AND METHODS OF INSTALLATION.
   B. INCLUDE TYPICAL CARVED SURFACE.
   C. INCLUDE SEALANT-FILLED JOINT COMPLYING WITH REQUIREMENTS IN SECTION 079200 "JOINT SEALANTS."
   D. INCLUDE AN AREA THAT HAS BEEN DAMAGED AND REPAIRED.
2. APPROVAL OF MOCKUPS DOES NOT CONSTITUTE APPROVAL OF DEVIATIONS FROM THE CONTRACT DOCUMENTS CONTAINED IN MOCKUPS UNLESS ARCHITECT SPECIFICALLY APPROVES SUCH DEVIATIONS IN WRITING.
3. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, APPROVED MOCKUPS MAY BECOME PART OF THE COMPLETED WORK IF UNDISTURBED AT TIME OF SUBSTANTIAL COMPLETION.

1.6 DELIVERY, STORAGE, AND HANDLING

A. STORE AND HANDLE STONE AND RELATED MATERIALS TO PREVENT DETERIORATION OR DAMAGE DUE TO MOISTURE, TEMPERATURE CHANGES, CONTAMINANTS, CORROSION, BREAKING, CHIPPING, AND OTHER CAUSES.

1. LIFT STONE WITH WIDE-BELT SLINGS; DO NOT USE WIRE ROPE OR ROPES THAT MIGHT CAUSE STAINING. MOVE STONE; IF REQUIRED, USING DOLLIES WITH CUSHIONED WOOD SUPPORTS.
2. STORE STONE ON WOOD SKIDS OR PALLETS WITH NONSTAINING, WATERPROOF COVERS. ARRANGE TO DISTRIBUTE WEIGHT EVENLY AND TO PREVENT DAMAGE TO STONE. VENTILATE UNDER COVERS TO PREVENT CONDENSATION.

B. MARK STONE UNITS, ON SURFACE THAT WILL BE CONCEALED AFTER INSTALLATION, WITH DESIGNATIONS USED ON SHOP DRAWINGS TO IDENTIFY INDIVIDUAL STONE UNITS. ORIENT MARKINGS ON VERTICAL PANELS SO THAT THEY ARE RIGHT SIDE UP WHEN UNITS ARE INSTALLED.

C. DELIVER SEALANTS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS LABELED WITH MANUFACTURER'S NAME, PRODUCT NAME AND DESIGNATION, COLOR, EXPIRATION PERIOD, POT LIFE, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.

D. STORE CEMENTITIOUS MATERIALS ON ELEVATED PLATFORMS, UNDER COVER, AND IN A DRY LOCATION. DO NOT USE CEMENTITIOUS MATERIALS THAT HAVE BECOME DAMP.

E. STORE AGGREGATES IN LOCATIONS WHERE GRADING AND OTHER REQUIRED CHARACTERISTICS CAN BE MAINTAINED AND WHERE CONTAMINATION CAN BE AVOIDED.

1.7 FIELD CONDITIONS

A. PROTECT STONE CLADDING DURING ERECTION BY DOING THE FOLLOWING.

1. COVER TOPS OF STONE CLADDING INSTALLATION WITH NONSTAINING, WATERPROOF SHEETING AT END OF EACH DAY'S WORK. COVER PARTIALLY COMPLETED STRUCTURES WHEN WORK IS NOT IN PROGRESS. EXTEND COVER A MINIMUM OF 24 INCHES DOWN BOTH SIDES AND HOLD SECURELY IN PLACE.
2. PREVENT STAINING OF STONE FROM MORTAR, GROUT, SEALANTS, AND OTHER SOURCES. IMMEDIATELY REMOVE SUCH MATERIALS WITHOUT DAMAGING STONE.
3. PROTECT BASE OF WALLS FROM RAIN-SPLASHED MUD AND MORTAR SPLATTER BY COVERINGS SPREAD ON GROUND AND OVER WALL SURFACE.
4. PROTECT SILLS, LEDGES, AND PROJECTIONS FROM MORTAR AND SEALANT DROPPINGS.

B. COLD-WEATHER REQUIREMENTS: DO NOT USE FROZEN MATERIALS OR MATERIALS MIXED OR COATED WITH ICE OR FROST. REMOVE AND REPLACE STONE CLADDING DAMAGED BY FROST OR FREEZING CONDITIONS. COMPLY WITH COLD-WEATHER CONSTRUCTION AND PROTECTION REQUIREMENTS FOR MASONRY CONTAINED IN TMS 602/ACI 530.1/ASCE 6.

C. HOT-WEATHER REQUIREMENTS: COMPLY WITH HOT-WEATHER CONSTRUCTION AND PROTECTION REQUIREMENTS FOR MASONRY CONTAINED IN TMS 602/ACI 530.1/ASCE 6.

D. ENVIRONMENTAL LIMITATIONS FOR SEALANTS: DO NOT INSTALL SEALANTS WHEN AMBIENT AND SUBSTRATE TEMPERATURES ARE OUTSIDE LIMITS PERMITTED BY SEALANT MANUFACTURER OR BELOW 40 DEG F (5 DEG C) OR WHEN JOINT SUBSTRATES ARE WET.

1.8 COORDINATION

A. COORDINATE INSTALLATION OF INSERTS THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. FLASHING REGLETS, AND SIMILAR ITEMS TO BE USED BY STONE CLADDING INSTALLER FOR ANCHORING, SUPPORTING, AND FLASHING OF STONE CLADDING ASSEMBLY. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING SUCH ITEMS AND DELIVER TO PROJECT SITE IN TIME FOR INSTALLATION.

B. TIME DELIVERY AND INSTALLATION OF STONE CLADDING TO AVOID EXTENDED ON-SITE STORAGE AND TO COORDINATE WITH WORK ADJACENT TO STONE CLADDING

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. SOURCE LIMITATIONS FOR STONE: OBTAIN STONE, REGARDLESS OF FINISH, FROM SINGLE QUARRY WITH RESOURCES TO PROVIDE MATERIALS OF CONSISTENT QUALITY IN APPEARANCE AND PHYSICAL PROPERTIES.

1. FOR STONE TYPES THAT INCLUDE SAME LIST OF VARIETIES AND SOURCES, PROVIDE SAME VARIETY FROM SAME SOURCE FOR EACH.
2. MAKE QUARRIED BLOCKS AVAILABLE FOR EXAMINATION BY ARCHITECT.

B. SOURCE LIMITATIONS FOR MORTAR MATERIALS: OBTAIN MORTAR INGREDIENTS OF UNIFORM QUALITY FOR EACH CEMENTITIOUS COMPONENT FROM SINGLE MANUFACTURER AND EACH AGGREGATE FROM SINGLE SOURCE OR PRODUCER.

C. SOURCE LIMITATIONS FOR OTHER MATERIALS: OBTAIN EACH TYPE OF STONE ACCESSORY, SEALANT, AND OTHER MATERIAL FROM SINGLE MANUFACTURER FOR EACH PRODUCT.

D. STONE FABRICATORS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. POLYCOR OR APPROVED EQUAL

2.2 PERFORMANCE REQUIREMENTS

A. DELEGATED DESIGN: ENGAGE A QUALIFIED AND LICENSED IN VIRGINIA PROFESSIONAL STRUCTURAL ENGINEER TO DESIGN STONE CLADDING ASSEMBLY ANCHORING AND SUPPORT.

B. GENERAL: DESIGN STONE ANCHORS AND ANCHORING SYSTEMS ACCORDING TO ASTM C1242.

1. STONE ANCHORS WITHSTAND NOT LESS THAN TWO TIMES THE WEIGHT OF THE STONE CLADDING IN BOTH COMPRESSION AND TENSION.

C. STRUCTURAL PERFORMANCE: STONE CLADDING ASSEMBLY WITHSTANDS THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:

1. WIND LOADS: AS INDICATED.
2. EQUIPMENT LOADS: ALLOW FOR LOADS DUE TO WINDOW CLEANING AND MAINTENANCE EQUIPMENT.

D. MODEL BUILDING CODES AND ASCE/SEI 7 ESTABLISH CRITERIA FOR BUILDINGS SUBJECT TO EARTHQUAKE MOTIONS. VERIFY REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

E. SEISMIC PERFORMANCE: STONE CLADDING ASSEMBLY WITHSTANDS THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO ASCE/SEI 7.

1. COMPONENT IMPORTANCE FACTOR: 1.0.

F. THERMAL MOVEMENTS: ALLOW FOR THERMAL MOVEMENTS FROM AMBIENT AND SURFACE TEMPERATURE CHANGES.

1. TEMPERATURE CHANGE: 120 DEG F (67 DEG C), AMBIENT; 180 DEG F (100 DEG C), MATERIAL SURFACES.

G. SHRINKAGE AND CREEP: ALLOW FOR PROGRESSIVE VERTICAL SHORTENING EQUAL TO IN 10 FEET (3 M).

H. SAFETY FACTORS FOR STONE: DESIGN STONE CLADDING ASSEMBLY TO WITHSTAND LOADS INDICATED WITHOUT EXCEEDING STONE'S ALLOWABLE WORKING STRESS DETERMINED BY DIVIDING STONE'S AVERAGE ULTIMATE STRENGTH, AS ESTABLISHED BY TESTING, BY THE FOLLOWING SAFETY FACTORS:

1. SAFETY FACTOR FOR GRANITE: 3

I. DESIGN STONE ANCHORS AND BACKUP STRUCTURE TO WITHSTAND LOADS INDICATED WITHOUT EXCEEDING ALLOWABLE WORKING STRESSES ESTABLISHED BY THE FOLLOWING:

1. FOR STRUCTURAL STEEL: AISC 360.
2. FOR POSTINSTALLED FASTENERS IN MASONRY: ONE-SIXTH OF TESTED CAPACITY WHEN INSTALLED IN MASONRY UNITS INDICATED.

J. LIMIT DEFLECTION IN EACH PREFABRICATED ASSEMBLY CAUSED BY INDICATED LOADS AND THERMAL MOVEMENTS ACTING SINGLY OR IN COMBINATION WITH ONE ANOTHER, TO NOT MORE THAN 1/720 OF ASSEMBLY'S CLEAR SPAN OR THE FOLLOWING, WHICHEVER IS SMALLER:

1. 1/16 INCH MEASURED IN PLANE OF WALL.
2. 1/4 INCH MEASURED PERPENDICULAR TO WALL.

K. PROVISIONS FOR FABRICATION AND ERECTION TOLERANCES: ALLOW FOR FABRICATION AND ERECTION TOLERANCES OF BACKUP STRUCTURAL SYSTEM.

L. PROVISION FOR DEFLECTION OF BUILDING STRUCTURE:

1. DEFLECTION DUE TO WEIGHT OF STONE CLADDING ASSEMBLY: ALLOW FOR 1/4-INCH VERTICAL DEFLECTION IN 20-FOOT (6-M) SPAN OF STRUCTURAL MEMBERS SUPPORTING STONE CLADDING ASSEMBLY.

M. CORROSION AND STAINING CONTROL: PREVENT GALVANIC AND OTHER FORMS OF CORROSION AS WELL AS STAINING BY ISOLATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS. MATERIALS DO NOT STAIN EXPOSED SURFACES OF STONE AND JOINT MATERIALS.

2.3 GRANITE

A. BASIS OF DESIGN: POLYCOR WHITE MOUNT AIRY GRANITE OR APPROVED EQUAL.

1. GRANITE TO MATCH EXISTING GRANITE ON SITE. PROVIDE BASIS OF DESIGN SAMPLES AND OTHER SIMILAR WHITE/LIGHT GREY GRANITE FOR OWNER'S REVIEW ON SITE TO CONFIRM.

B. MATERIAL STANDARD: COMPLY WITH ASTM C615/C615M.

C. DESCRIPTION: UNIFORM, FINE GRAINED, WHITE GRAY STONE WITH VEINING.

D. CUT: FLEURI.

E. CUT STONE FROM ONE BLOCK OR CONTIGUOUS, MATCHED B

5) CONCEAL FASTENERS AND EXPANSION PROVISIONS WHERE POSSIBLE. DO NOT USE EXPOSED FASTENERS ON FACES EXPOSED TO VIEW.

B) FABRICATION TOLERANCES:

1) FABRICATE SHEET METAL FLASHING AND TRIM THAT IS CAPABLE OF INSTALLATION TO A TOLERANCE OF 1/4 INCH IN 20 FEET ON SLOPE AND LOCATION LINES INDICATED ON DRAWINGS AND WITHIN 1/8-INCH OFFSET OF ADJOINING FACES AND OF ALIGNMENT OF MATCHING PROFILES.
2) FABRICATE SHEET METAL FLASHING AND TRIM THAT IS CAPABLE OF INSTALLATION TO TOLERANCES SPECIFIED.

C) EXPANSION PROVISIONS: FORM METAL FOR THERMAL EXPANSION OF EXPOSED FLASHING AND TRIM.

1) FORM EXPANSION JOINTS OF INTERMESHING HOOKED FLANGES, NOT LESS THAN 1 INCH DEEP, FILLED WITH BUTYL SEALANT CONCEALED WITHIN JOINTS.
2) USE LAPPED EXPANSION JOINTS ONLY WHERE INDICATED ON DRAWINGS.

D) SEALANT JOINTS: WHERE MOVABLE, NONEXPANSION-TYPE JOINTS ARE REQUIRED, FORM METAL IN ACCORDANCE WITH CITED SHEET METAL STANDARD TO PROVIDE FOR PROPER INSTALLATION OF ELASTOMERIC SEALANT.

E) FABRICATE CLEATS AND ATTACHMENT DEVICES FROM SAME MATERIAL AS ACCESSORY BEING ANCHORED OR FROM COMPATIBLE, NONCORROSIVE METAL.

F) FABRICATE CLEATS AND ATTACHMENT DEVICES OF SIZES AS RECOMMENDED BY CITED SHEET METAL STANDARD FOR APPLICATION, BUT NOT LESS THAN THICKNESS OF METAL BEING SECURED.

G) SEAMS:

1) FABRICATE NONMOVING SEAMS WITH FLAT-LOCK SEAMS. FORM SEAMS AND SEAL WITH ELASTOMERIC SEALANT UNLESS OTHERWISE RECOMMENCED BY SEALANT MANUFACTURER FOR INTENDED USE. RIVET JOINTS WHERE NECESSARY FOR STRENGTH

2.5 WALL SHEET METAL FABRICATIONS

A) OPENING FLASHINGS IN FRAME CONSTRUCTION: FABRICATE HEAD, SILL, JAMB, AND SIMILAR FLASHINGS TO EXTEND 4 INCHES BEYOND WALL OPENINGS. FORM HEAD AND SILL FLASHING WITH 2-INCH- HIGH, END DAMS. FABRICATE FROM THE FOLLOWING MATERIALS

1) STAINLESS STEEL: 0.0156 INCH THICK.

2.6 TOP OF WALL METAL FABRICATIONS

A) BASE FLASHING: FABRICATE FROM THE FOLLOWING MATERIALS:

1) STAINLESS STEEL: 0.0188 INCH THICK.

B) COUNTERFLASHING: FABRICATE FROM THE FOLLOWING MATERIALS:

1) STAINLESS STEEL: 0.0188 INCH THICK.

C) TERMINATION BAR: STAINLESS STEEL.

3.1 EXAMINATION

A) EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES, SUBSTRATE, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.

1) VERIFY COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES OF SUBSTRATES.
2) VERIFY THAT SUBSTRATE IS SOUND, DRY, SMOOTH, CLEAN, SLOPED FOR DRAINAGE, AND SECURELY ANCHORED.
3) VERIFY THAT AIR- OR WATER-RESISTANT BARRIERS HAVE BEEN INSTALLED OVER SHEATHING OR BACKING SUBSTRATE TO PREVENT AIR INFILTRATION OR WATER PENETRATION.

B) PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 INSTALLATION, GENERAL

A) INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH DETAILS INDICATED AND RECOMMENDATIONS OF CITED SHEET METAL STANDARD THAT APPLY TO INSTALLATION CHARACTERISTICS REQUIRED UNLESS OTHERWISE INDICATED ON DRAWINGS.

1) INSTALL FASTENERS, SOLDER, PROTECTIVE COATINGS, SEPARATORS, SEALANTS, AND OTHER MISCELLANEOUS ITEMS AS REQUIRED TO COMPLETE SHEET METAL FLASHING AND TRIM SYSTEM.
2) INSTALL SHEET METAL FLASHING AND TRIM TRUE TO LINE, LEVELS, AND SLOPES. PROVIDE UNIFORM, NEAT SEAMS WITH MINIMUM EXPOSURE OF SOLDER.
3) ANCHOR SHEET METAL FLASHING AND TRIM AND OTHER COMPONENTS OF THE WORK SECURELY IN PLACE, WITH PROVISIONS FOR THERMAL AND STRUCTURAL MOVEMENT.
4) INSTALL SHEET METAL FLASHING AND TRIM TO FIT SUBSTRATES AND TO RESULT IN WATERTIGHT PERFORMANCE.
5) INSTALL CONTINUOUS CLEATS WITH FASTENERS SPACED NOT MORE THAN 12 INCHES O.C.
6) SPACE INDIVIDUAL CLEATS NOT MORE THAN 12 INCHES APART. ATTACH EACH CLEAT WITH AT LEAST TWO FASTENERS. BEND TABS OVER FASTENERS.
7) INSTALL EXPOSED SHEET METAL FLASHING AND TRIM WITH LIMITED OIL-CANNING, AND FREE OF BUCKLING AND TOOL MARKS.
8) DO NOT FIELD CUT SHEET METAL FLASHING AND TRIM BY TORCH.

B) METAL PROTECTION: WHERE DISSIMILAR METALS CONTACT EACH OTHER, OR WHERE METAL CONTACTS PRESSURE-TREATED WOOD OR OTHER CORROSIVE SUBSTRATES, PROTECT AGAINST GALVANIC ACTION OR CORROSION BY PAINTING CONTACT SURFACES WITH BITUMINOUS COATING OR BY OTHER PERMANENT SEPARATION AS RECOMMENDED BY SHEET METAL MANUFACTURER OR CITED SHEET METAL STANDARD.

1) COAT CONCEALED SIDE OF STAINLESS STEEL SHEET METAL FLASHING AND TRIM WITH BITUMINOUS COATING WHERE FLASHING AND TRIM CONTACT WOOD, FERROUS METAL, OR CEMENTITIOUS CONSTRUCTION.
2) UNDERLAYMENT: WHERE INSTALLING SHEET METAL FLASHING AND TRIM DIRECTLY ON CEMENTITIOUS OR WOOD SUBSTRATES, INSTALL UNDERLAYMENT AND COVER WITH SLIP SHEET.

C) EXPANSION PROVISIONS: PROVIDE FOR THERMAL EXPANSION OF EXPOSED FLASHING AND TRIM.

1) SPACE MOVEMENT JOINTS AT MAXIMUM OF 10 FEET WITH NO JOINTS WITHIN 24 INCHES OF CORNER OR INTERSECTION.
2) FORM EXPANSION JOINTS OF INTERMESHING HOOKED FLANGES, NOT LESS THAN 1 INCH DEEP, FILLED WITH SEALANT CONCEALED WITHIN JOINTS.

D) FASTENERS: USE FASTENER SIZES THAT PENETRATE SUBSTRATE NOT LESS THAN RECOMMENDED BY FASTENER MANUFACTURER TO ACHIEVE MAXIMUM PULL-OUT RESISTANCE.

E) CONCEAL FASTENERS AND EXPANSION PROVISIONS WHERE POSSIBLE IN EXPOSED WORK AND LOCATE TO MINIMIZE POSSIBILITY OF LEAKAGE. COVER AND SEAL FASTENERS AND ANCHORS AS REQUIRED FOR A TIGHT INSTALLATION.

F) SEAL JOINTS AS REQUIRED FOR WATERTIGHT CONSTRUCTION.

1) USE SEALANT-FILLED JOINTS UNLESS OTHERWISE INDICATED.

a) EMBED HOOKED FLANGES OF JOINT MEMBERS NOT LESS THAN 1 INCH INTO SEALANT.
b) FORM JOINTS TO COMPLETELY CONCEAL SEALANT.
c) WHEN AMBIENT TEMPERATURE AT TIME OF INSTALLATION IS BETWEEN 40 AND 70 DEG F, SET JOINT MEMBERS FOR 50 PERCENT MOVEMENT EACH WAY.
d) ADJUST SETTING PROPORTIONATELY FOR INSTALLATION AT HIGHER AMBIENT TEMPERATURES.

(i) DO NOT INSTALL SEALANT-TYPE JOINTS AT TEMPERATURES BELOW 40 DEG F.

2) PREPARE JOINTS AND APPLY SEALANTS TO COMPLY WITH REQUIREMENTS IN SECTION 079200 "JOINT SEALANTS."

G) SOLDERED JOINTS: CLEAN SURFACES TO BE SOLDERED, REMOVING OILS AND FOREIGN MATTER.

1) PRETIN EDGES OF SHEETS WITH SOLDER TO WIDTH OF 1-1/2 INCHES; HOWEVER, REDUCE PRETINNING WHERE PRETINNED SURFACE WOULD SHOW IN COMPLETED WORK.
2) DO NOT USE TORCHES FOR SOLDERING.
3) HEAT SURFACES TO RECEIVE SOLDER, AND FLOW SOLDER INTO JOINT.

a) FILL JOINT COMPLETELY.
b) COMPLETELY REMOVE FLUX AND SPATTER FROM EXPOSED SURFACES.

3.3 INSTALLATION OF TOP OF WALL FLASHINGS

A) INSTALL SHEET METAL FLASHING AND TRIM TO COMPLY WITH PERFORMANCE REQUIREMENTS, SHEET METAL MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AND CITED SHEET METAL STANDARD.

1) PROVIDE CONCEALED FASTENERS WHERE POSSIBLE, AND SET UNITS TRUE TO LINE, LEVELS, AND SLOPES.
2) INSTALL WORK WITH LAPS, JOINTS, AND SEAMS THAT ARE PERMANENTLY WATERTIGHT AND WEATHER RESISTANT.

B) TOP OF WALL FLASHING.

1) ANCHOR TO RESIST UPLIFT AND OUTWARD FORCES IN ACCORDANCE WITH RECOMMENDATIONS IN CITED SHEET METAL STANDARD UNLESS OTHERWISE INDICATED.

3.4 INSTALLATION OF WALL FLASHINGS

A) INSTALL SHEET METAL WALL FLASHING TO INTERCEPT AND EXCLUDE PENETRATING MOISTURE IN ACCORDANCE WITH CITED SHEET METAL STANDARD UNLESS OTHERWISE INDICATED AND AS INDICATED ON DRAWINGS.

3.5 INSTALLATION TOLERANCES

A) INSTALLATION TOLERANCES: SHIM AND ALIGN SHEET METAL FLASHING AND TRIM WITHIN INSTALLED TOLERANCE OF 1/4 INCH IN 20 FEET ON SLOPE AND LOCATION LINES INDICATED ON DRAWINGS AND WITHIN 1/8-INCH OFFSET OF ADJOINING FACES AND OF ALIGNMENT OF MATCHING PROFILES.

3.6 CLEANING

A) CLEAN EXPOSED METAL SURFACES OF SUBSTANCES THAT INTERFERE WITH UNIFORM OXIDATION AND WEATHERING.

B) CLEAN AND NEUTRALIZE FLUX MATERIALS. CLEAN OFF EXCESS SOLDER.

C) CLEAN OFF EXCESS SEALANTS.

3.7 PROTECTION

A) REMOVE TEMPORARY PROTECTIVE COVERINGS AND STRIPPABLE FILMS AS SHEET METAL FLASHING AND TRIM ARE INSTALLED UNLESS OTHERWISE INDICATED IN MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

B) ON COMPLETION OF SHEET METAL FLASHING AND TRIM INSTALLATION, REMOVE UNUSED MATERIALS AND CLEAN FINISHED SURFACES AS RECOMMENDED IN WRITING BY SHEET METAL FLASHING AND TRIM MANUFACTURER.

C) MAINTAIN SHEET METAL FLASHING AND TRIM IN CLEAN CONDITION DURING CONSTRUCTION.

D) REPLACE SHEET METAL FLASHING AND TRIM THAT HAVE BEEN DAMAGED OR THAT HAVE DETERIORATED BEYOND SUCCESSFUL REPAIR BY FINISH TOUCHUP OR SIMILAR MINOR REPAIR PROCEDURES, AS DETERMINED BY ARCHITECT.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

1.1 WARRANTY

A) SPECIAL INSTALLER'S WARRANTY: INSTALLER AGREES TO REPAIR OR REPLACE JOINT SEALANTS THAT DO NOT COMPLY WITH PERFORMANCE AND OTHER REQUIREMENTS SPECIFIED IN THIS SECTION WITHIN SPECIFIED WARRANTY PERIOD.

1) WARRANTY PERIOD: TWO YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

B) SPECIAL MANUFACTURER'S WARRANTY: MANUFACTURER AGREES TO FURNISH JOINT SEALANTS TO REPAIR OR REPLACE THOSE JOINT SEALANTS THAT DO NOT COMPLY WITH PERFORMANCE AND OTHER REQUIREMENTS SPECIFIED IN THIS SECTION WITHIN SPECIFIED WARRANTY PERIOD.

1) WARRANTY PERIOD: FIVE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

2.1 JOINT SEALANTS, GENERAL

A) COLORS OF EXPOSED JOINT SEALANTS: WHITE OR AS INDICATED BY MANUFACTURER'S DESIGNATIONS.

2.2 SILICONE JOINT SEALANTS

A) SILICONE, S, NS, 100/50, NT: SINGLE-COMPONENT, NONSAG, PLUS 100 PERCENT AND MINUS 50 PERCENT MOVEMENT CAPABILITY, NONTRAFFIC-USE, NEUTRAL-CURING SILICONE JOINT SEALANT: ASTM C 920, TYPE S, GRADE NS, CLASS 100/50, USE NT.

1) MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

a) BASIS OF DESIGN: PECORA 890NTS/890FTS
b) DOW CORNING CORP: 790
c) SIKA CORP: SIKASIL-C990
d) TREMCO INCORPORATED – SPECTRUM 800

2) APPLICATIONS: USE FOR EXTERIOR JOINTS IN VERTICAL SURFACES AND HORIZONTAL NON-TRAFFIC SURFACES
3) COLOR: AS SELECTED BY ARCHITECT FOR FULL RANGE PER APPLICATION LOCATION.

2.3 URETHANE JOINT SEALANTS

A) URETHANE, S, P, 25, T: SINGLE-COMPONENT, POURABLE, PLUS 25 PERCENT AND MINUS 25 PERCENT MOVEMENT CAPABILITY, TRAFFIC- AND NONTRAFFIC-USE, URETHANE JOINT SEALANT: ASTM C 920, TYPE S, GRADE P, CLASS 25, USES T.

1) MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

a) PECORA CORP – NR-201
b) SIKA CORPORATION – SIKAFLEX – 1CSL
c) TREMCO INCORPORATED. – VULKEM 25

2) APPLICATIONS: USE FOR EXTERIOR JOINTS IN HORIZONTAL WALKING SURFACES
3) COLOR: AS SELECTED BY ARCHITECT FOR FULL RANGE PER APPLICATION LOCATION.

2.4 JOINT-SEALANT BACKING

A) CYLINDRICAL SEALANT BACKINGS: ASTM C 1330, TYPE C (CLOSED-CELL MATERIAL WITH A SURFACE SKIN) AND OF SIZE AND DENSITY TO CONTROL SEALANT DEPTH AND OTHERWISE CONTRIBUTE TO PRODUCING OPTIMUM SEALANT PERFORMANCE.

B) BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MANUFACTURER.

3.1 PREPARATION

A) SURFACE CLEANING OF JOINTS: CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE FOLLOWING REQUIREMENTS:

1) CLEAN NONPOROUS JOINT SUBSTRATE SURFACES WITH CHEMICAL CLEANERS OR OTHER MEANS THAT DO NOT STAIN, HARM SUBSTRATES, OR LEAVE RESIDUES CAPABLE OF INTERFERING WITH ADHESION.

B) JOINT PRIMING: PRIME JOINT SUBSTRATES WHERE RECOMMENDED BY JOINT-SEALANT MANUFACTURER OR AS INDICATED BY PRECONSTRUCTION JOINT-SEALANT-SUBSTRATE TESTS OR PRIOR EXPERIENCE.

C) MASKING TAPE: USE MASKING TAPE WHERE REQUIRED TO PREVENT CONTACT OF SEALANT OR PRIMER WITH ADJOINING SURFACES.

3.2 INSTALLATION OF JOINT SEALANTS

A) GENERAL: COMPLY WITH ASTM C 1193 AND JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.

B) INSTALL SEALANT BACKINGS OF KIND INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

C) INSTALL BOND-BREAKER TAPE BEHIND SEALANTS WHERE SEALANT BACKINGS ARE NOT USED BETWEEN SEALANTS AND BACKS OF JOINTS.

D) INSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKINGS ARE INSTALLED:

1) PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
2) COMPLETELY FILL RECESSES IN EACH JOINT CONFIGURATION.
3) PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

E) TOOLING OF NONSAG SEALANTS: IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED, USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.

1) PROVIDE CONCAVE JOINT PROFILE PER FIGURE 8A IN ASTM C 1193 UNLESS OTHERWISE INDICATED.

END OF SECTION 079200

DIVISION 8

SECTION 087100 - DOOR HARDWARE

1.1 COORDINATION

A) ELECTRICAL SYSTEM ROUGHING-IN: COORDINATE LAYOUT AND INSTALLATION OF ELECTRIFIED DOOR HARDWARE WITH CONNECTIONS TO POWER SUPPLIES.

B) EXISTING OPENINGS: WHERE HARDWARE COMPONENTS ARE SCHEDULED FOR APPLICATION TO EXISTING CONSTRUCTION OR WHERE MODIFICATIONS TO EXISTING DOOR HARDWARE ARE REQUIRED, FIELD VERIFY EXISTING CONDITIONS AND COORDINATE INSTALLATION OF DOOR HARDWARE TO SUIT OPENING CONDITIONS AND TO PROVIDE PROPER DOOR OPERATION

1.2 WARRANTY

A) SPECIAL WARRANTY: MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF DOOR HARDWARE THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1) WARRANTY PERIOD: THREE YEARS FROM DATE OF SUBSTANTIAL COMPLETION UNLESS OTHERWISE INDICATED BELOW:

a) MANUAL CLOSERS: 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

2.1 PERFORMANCE REQUIREMENTS

A) ELECTRIFIED DOOR HARDWARE: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B) MEANS OF EGRESS DOORS: LATCHES DO NOT REQUIRE MORE THAN 15 LBF TO RELEASE THE LATCH. LOCKS DO NOT REQUIRE USE OF A KEY, TOOL, OR SPECIAL KNOWLEDGE FOR OPERATION.

C) ACCESSIBILITY REQUIREMENTS: FOR DOOR HARDWARE ON DOORS IN AN ACCESSIBLE ROUTE, COMPLY WITH ICC A117.1

1) PROVIDE OPERATING DEVICES THAT DO NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST AND THAT OPERATE WITH A FORCE OF NOT MORE THAN 5 LBF.

2) BEVEL RAISED THRESHOLDS WITH A SLOPE OF NOT MORE THAN 1:2. PROVIDE THRESHOLDS NOT MORE THAN 1/2 INCH (13 MM) HIGH.

3) ADJUST DOOR CLOSER SWEEP PERIODS SO THAT, FROM AN OPEN POSITION OF 90 DEGREES, THE DOOR WILL TAKE AT LEAST 5 SECONDS TO MOVE TO A POSITION OF 12 DEGREES FROM THE LATCH.

2.2 SCHEDULED DOOR HARDWARE

A) PROVIDE PRODUCTS FOR EACH DOOR THAT COMPLY WITH REQUIREMENTS INDICATED IN DOOR HARDWARE SCHEDULE.

1) DOOR HARDWARE AS INDICATED BELOW:

a) EXISTING DOORS - PROVIDE THE FOLLOWING:
(i) 1 ADA THUMB TURN
(ii) 1 STOREROOM MORTISE LOCK
(iii) 2 MORTISE CYLINDERS
(iv) 1 ELECTRIC STRIKE
(v) 2 LEVER
(vi) 2 ROSE
(vii) 2 DOOR CLOSERS (EA DOOR)
(viii) WEATHERSTRIPPING/DOOR SWEEP (EA DOOR)
(ix) 2 AUTOMATIC OPERATOR
(x) POWER TRANSFER/POWER SUPPLY/WIRE HARNESS
(xi) 2 SLIM ACTUATOR – EXTERIOR POST MOUNTED AND INTERIOR WALL MOUNTED.
(xii) 1 KEY SWITCH
b) ALL OTHER EXISTING HARDWARE TO REMAIN

2.9 2.10 FINISHES

A) PROVIDE FINISHES COMPLYING WITH BHMA A156.18 AS INDICATED IN DOOR HARDWARE SCHEDULE.

B) PROVIDE FINISH TO MATCH EXISTING. PROVIDE SAMPLES FOR OWNER'S REVIEW AND FINAL CONFIRMATION.

3.1 INSTALLATION

A) EXISTING DOOR:
1) KEEP EXISTING LOCK AND HARDWARE. PREP DOOR AND FRAME FOR NEW HARDWARE.

B) MOUNTING HEIGHTS: MOUNT DOOR HARDWARE UNITS AT HEIGHTS TO COMPLY WITH THE FOLLOWING UNLESS OTHERWISE INDICATED OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS.

1) WOOD DOORS: DHI'S "RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR WOOD FLUSH DOORS."

C) INSTALL EACH DOOR HARDWARE ITEM TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. WHERE CUTTING AND FITTING ARE REQUIRED TO INSTALL DOOR HARDWARE ONTO OR INTO SURFACES THAT ARE LATER TO BE PAINTED OR FINISHED IN ANOTHER WAY, COORDINATE REMOVAL, STORAGE, AND REINSTALLATION OF SURFACE PROTECTIVE TRIM UNITS WITH FINISHING WORK. DO NOT INSTALL SURFACE-MOUNTED ITEMS UNTIL FINISHES HAVE BEEN COMPLETED ON SUBSTRATES INVOLVED.

D) WIRING: COORDINATE WITH ELECTRICIAN ON REQUIREMENTS.

E) DOOR CLOSERS: MOUNT CLOSERS ON INSIDE OF EXTERIOR DOORS.

F) PERIMETER GASKETING: APPLY TO HEAD AND JAMB, FORMING SEAL BETWEEN DOOR AND FRAME.

1) DO NOT NOTCH PERIMETER GASKETING TO INSTALL OTHER SURFACE-APPLIED HARDWARE.

G) DOOR BOTTOMS: APPLY TO BOTTOM OF DOOR, FORMING SEAL WITH THRESHOLD WHEN DOOR IS CLOSED.

3.2 ADJUSTING

A) ADJUST AND CHECK EACH OPERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

END OF SECTION 087100

DIVISION 9

SECTION 099113 - EXTERIOR PAINTING

2.1 MANUFACTURERS

A) MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:

B) BENJAMIN MOORE & CO.

2.2 PAINT, GENERAL

A) MPI STANDARDS: PRODUCTS SHALL COMPLY WITH MPI STANDARDS INDICATED AND SHALL BE LISTED IN ITS "MPI APPROVED PRODUCTS LISTS."

B) MATERIAL COMPATIBILITY:

1) MATERIALS FOR USE WITHIN EACH PAINT SYSTEM SHALL BE COMPATIBLE WITH ONE ANOTHER AND SUBSTRATES INDICATED, UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.

2) FOR EACH COAT IN A PAINT SYSTEM, PRODUCTS SHALL BE RECOMMENDED IN WRITING BY TOPCOAT MANUFACTURERS FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.

C) COLORS: AS INDICATED ON DRAWINGS.

3.1 EXAMINATION

A) EXAMINE SUBSTRATES AND CONDITIONS, WITH APPLICATOR PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR MAXIMUM MOISTURE CONTENT AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.

B) VERIFY SUITABILITY OF SUBSTRATES, INCLUDING SURFACE CONDITIONS AND COMPATIBILITY WITH EXISTING FINISHES AND PRIMERS.

C) PROCEED WITH COATING APPLICATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

1) APPLICATION OF COATING INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

3.2 PREPARATION

A) COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN "MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL" APPLICABLE TO SUBSTRATES AND PAINT SYSTEMS INDICATED.

3.3 APPLICATION

A) APPLY PAINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN "MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL."

B) APPLY PAINTS TO PRODUCE SURFACE FILMS WITHOUT CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, ROLLER TRACKING, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS. CUT IN SHARP LINES AND COLOR BREAKS.

3.4 EXTERIOR PAINTING SCHEDULE

A) STEEL SUBSTRATES:

1) PIGMENTED POLYURETHANE OVER EXPOXY SYSTEM MPI EXT 5.1H:

a) PRIME COAT: PRIMER, EPOXY, ANTI-CORROSIVE, FOR METAL MPI #101.
b) INTERMEDIATE COAT: EPOXY, GLOSS, MPI #77
c) FIRST AND SECOND TOPCOAT: POLYURETHANE, TWO COMPONENT, PIGMENTED, GLOSS (MPI GLOSS LEVEL 9), MPI #72.

B) GALVANIZED-METAL SUBSTRATE:

1) PIGMENTED POLY-URETHANE OVER EXPOXY SYSTEM MPI EXT 5.3L:

a) PRIME COAT: PRIMER, EPOXY, ANTI-CORROSIVE, FOR METAL MPI #101.
b) INTERMEDIATE COAT: POLYURETHANE, TWO COMPONENT, PIGMENTED, MATCHING TOPCOAT.
c) TOPCOAT: POLYURETHANE, TWO COMPONENT, PIGMENTED, GLOSS (MPI GLOSS LEVEL 6), MPI #72.

END OF SECTION 099123

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SEAL

COMMONWEALTH OF VIRGINIA
05/31/2024
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PROJECT NUMBER
G&H#: 23028

DATE
MAY 31, 2024

DRAWN BY: CHECKED BY:

REVISIONS

NO	DATE	DESCRIPTION
1	6/26/2024	REV 1 - MATERIAL SPECIFICATIONS

SHEET TITLE
SPECIFICATIONS

SHEET NUMBER
A10.03

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GENERAL STRUCTURAL NOTES

GENERAL/BUILDING CODE

GBC-1: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE ***2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC), EFFECTIVE JULY 1, 2021.***

A. NEW CONSTRUCTION - ***PART 1 OF VUSBC - "VIRGINIA CONSTRUCTION CODE"***

B. RENOVATION/ ALTERATION - ***PART II OF THE VUSBC - "VIRGINIA EXISTING BUILDING CODE"***

1. CLASSIFICATION OF WORK FOR THIS PROJECT = ALTERATION-LEVEL 2

GBC-2: NO LOADS IN EXCESS OF THE DESIGN LIVE LOADS LISTED SHALL BE IMPOSED UPON ANY AREA DURING CONSTRUCTION, UNLESS ADEQUATE SHORING OR OTHER MEANS IS PROVIDED TO SUPPORT THE EXCESSIVE LOADS.

GBC-3: TEMPORARY BRACING, GUY WIRES, SHORING, ETC., SHALL BE USED AS NECESSARY TO RESIST ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED DURING CONSTRUCTION.

GBC-4: THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. THE ERECTION PROCEDURE AND SEQUENCE INCLUDING THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

GBC-5: STRUCTURAL DRAWINGS DO NOT SHOW ALL OPENINGS. COORDINATE WITH ALL OTHER DISCIPLINES.

GBC-6: REFER TO ARCHITECTURAL DRAWINGS FOR WATERPROOFING DETAILS.

GBC-7: THE ENGINEER SHALL NOT HAVE THE AUTHORITY OR RESPONSIBILITY TO SUPERVISE OR DIRECT THE CONSTRUCTION WORK.

GBC-8: ALL SECTIONS AND DETAILS, WHETHER EXPLICITLY CUT ON PLAN OR NOT, SHALL BE CONSIDERED TYPICAL AND SHALL APPLY AT SIMILAR CONDITIONS.

GBC-9: ADDITIONS AND ALTERATIONS TO THE EXISTING BUILDING DO NOT INCREASE THE DEMAND/CAPACITY RATIO OF ANY EXISTING STRUCTURAL LATERAL FORCE RESISTING ELEMENT BY MORE THAN 10%; THEREFORE, AN ENGINEERING EVALUATION AND ANALYSIS OF THE ALTERED EXISTING STRUCTURE IS NOT REQUIRED.

EXISTING CONSTRUCTION

EC-1: INFORMATION REGARDING STRUCTURAL MEMBERS INDICATED TO BE EXISTING WAS OBTAINED DURING LIMITED FIELD OBSERVATIONS AND FROM LIMITED AVAILABLE EXISTING DRAWINGS. ACTUAL CONDITIONS MAY DIFFER FROM THAT WHICH IS INDICATED. IF THE CONTRACTOR UNCOVERS EXISTING CONDITIONS THAT DIFFER FROM THAT WHICH IS INDICATED ON PLAN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD OF THE DISCREPANCY IN ORDER THAT THE CONDITION MAY BE RESOLVED.

EC-2: FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO THE CONSTRUCTION AND FABRICATION OF ANY NEW STRUCTURAL MEMBERS.

EC-3: EXISTING CONSTRUCTION IS DENOTED USING SLANTED LETTERING, PHANTOM LINETYPE (DASH DOUBLE DOT), AND HALFTONE.

SPECIAL INSPECTIONS

SI-1: SPECIAL INSPECTIONS ARE REQUIRED BY THE BUILDING CODE (CHAPTER 17). REFER TO ARCH DRAWINGS FOR THE GENERAL INSPECTION REQUIREMENTS. THE FOLLOWING IS A LIST OF ITEMS THAT REQUIRE SPECIAL INSPECTION. REFER TO THE REFERENCED QUALITY ASSURANCE NOTE FOR THE SPECIFIC REQUIREMENTS FOR EACH ITEM. THE INDEPENDENT INSPECTION AGENCY, ENGAGED BY THE OWNER, SHALL REVIEW THE TEST PROCEDURES AND INSPECTIONS WITH THE STRUCTURAL ENGINEER OF RECORD, THE GENERAL CONTRACTOR, AND THE OWNER PRIOR TO CONDUCTING TESTS AND INSPECTIONS.

A. CONCRETE REINFORCING
B. CAST-IN-PLACE CONCRETE
C. UNIT MASONRY
D. POST-INSTALLED ANCHORS

SHOP DRAWING SUBMITTALS

SDS-1: THE CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, CIVIL, PLUMBING, AND ELECTRICAL REQUIREMENTS WITH THE STRUCTURAL DRAWINGS, INCLUDING THE LOCATION OF MISCELLANEOUS ITEMS AFFECTING THE STRUCTURAL WORK.

SDS-2: PROVIDE (1) ELECTRONIC PDF COPY OF ALL STRUCTURAL SUBMITTALS.

SDS-3: SHOP DRAWINGS ARE TO BE REVIEWED BY THE CONTRACTOR AND SUBCONTRACTOR PRIOR TO BEING SUBMITTED FOR APPROVAL. SUBMITTED SHEETS SHALL CONTAIN THE CONTRACTOR'S SIGNED AND DATED REVIEW STAMP.

SDS-4: THE FOLLOWING ARE THE REQUIRED STRUCTURAL SHOP DRAWING SUBMITTALS: CONCRETE REINFORCING, MASONRY REINFORCING, AND CONCRETE MIX DESIGN.

DESIGN LOADS AND PARAMETERS

DL-1: BUILDING RISK CATEGORY (TABLE 1604.5) = CATEGORY II

DL-2: LIVE LOADS (REFER TO FRAMING PLANS FOR MORE SPECIFIC LOADS)

FLOOR/RAMP	100 PSF
STAIRS	100 PSF

FLOOR LIVE LOAD REDUCTION NOT USED

DL-3: SNOW LOADS

P_g=20 PSF (GROUND SNOW)
C_e=1.0 (SNOW EXPOSURE FACTOR)
C_t=1.2 (THERMAL FACTOR)
I_s=1.0 (SNOW LOAD IMPORTANCE FACTOR: ASCE 7-16 TABLE 1.5-2)
P_f (SNOW LOAD FOR LOW-SLOPE ROOF)=0.7X(C_e)X(C_t)X(I_s)X(P_g) = 0.7X1.0X1.2X1.0X20 = 16.8 PSF
MINIMUM P_f (LOW-SLOPE ROOF WHERE $P_g \geq$ 20.0 PSF) = P_m = (P_g)X(I_s) = 20.0X1.0 = 20.0 PSF (USE 20 PSF MINIMUM)

DL-4: WIND LOADS

V=115 MPH (BUILDING RISK CATEGORY: II) (BASIC WIND SPEED: 3-SECOND GUST)
V_{asd} = 89 MPH
EXPOSURE B
K_{zt}=0.85 (WIND DIRECTIONALITY FACTOR)
K_{zt}=1.0 (TOPOGRAPHIC FACTOR)
K_{zt}=1.0 (GROUND ELEVATION FACTOR)

WIND LOAD DETERMINATION BY: ASCE 7-16, CHAPTERS 26, 27, 29, 30 (DIRECTIONAL PROCEDURE)

DL-5: SEISMIC LOADS

I_e=1.0 (ASCE 7-16 TABLE 1.5-2)
SEISMIC SITE CLASS = D (ASSUMED)

S_s=24.1%G	S_{ms}=(F_a)X(S_s)=(1.6)X(24.1) = 38.56%G
S_1=5.6%G	S_{m1}=(F_v)X(S_1)=(2.4)X(5.6) = 13.44%G
F_a=1.6	S_{ds}=(2/3)X(S_{ms}) = 25.7%G
F_v=2.40	S_{d1}=(2/3)X(S_{m1}) = 8.96%G

SEISMIC DESIGN CATEGORY = B

BASIC STRUCTURAL SYSTEM: BEARING WALL SYSTEMS

SEISMIC- FORCE- RESISTING SYSTEM: INTERMEDIATE REINFORCED MASONRY SHEAR WALLS

R_w (RESPONSE MODIFICATION FACTOR)	= 3.5
Ω_{sy} (SYSTEM OVERSTRENGTH FACTOR)	= 2.5
C_{dy} (DEFLECTION AMPLIFICATION FACTOR)	= 2.25

ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE METHOD
STRUCTURAL HEIGHT, h_n = 3.0 FT
SEISMIC RESPONSE COEFFICIENT, C_s = 7.3%G

DL-6: EARTH PRESSURES (EQUIVALENT FLUID PRESSURES)

ACTIVE (CANTILEVERED WALLS)	45 PCF (ASSUMED)
PASSIVE	250 PCF (ASSUMED)
FRICTION COEFFICIENT FOR SLIDING	0.35 (ASSUMED)

DESIGN LOADS AND PARAMETERS (CONT.)

DL-7: ICE LOADS

ICE DENSITY= 56 pcf (ASCE 7-16, SECTION 10.4)
t_i=1.5" (NOMINAL ICE THICKNESS AT 32˚ HT, ASCE 7-16 Fig 10.4-2)
CONCURRENT TEMPERATURE = 15 DEGREES F
GUST SPEED = 30 MPH
I_{ice}=1.0 (ICE LOAD IMPORTANCE FACTOR, ASCE 7-16, TABLE 1.5-2)
Z_g=30' (HT ABOVE GROUND)
f_{zt}=(Z/33)$^{0.10}$ (HT FACTOR, ASCE 7-16 EQ 10.4-4) = (30/33)$^{0.10}$ = 0.99
K_{zt}=1.0 (TOPOGRAPHIC FACTOR, ASCE 7-16 CH. 26)
t_{ice}=(t)( )( )(K_{zt})$^{0.35}$ (DESIGN ICE THICKNESS, ASCE 7-16 EQ 10.4-5) = (1.5") (1.0) (0.99) (1.0)$^{0.35}$ = 1.49"
WEIGHT OF ICE = 1.49"/12 X 56 PCF = 6.95 PSF SURFACE AREA

DL-8: RAIN LOADS

i_w=3.25 in/hr (VUSBC 2018 FIGURE 1611.1)
A=2,500 SF (WORST CASE AREA PER SECONDARY DRAIN, 4" DIA OUTLET PIPE MIN)
Q=0.0104 (A) (i) (FLOW RATE 7-16 EQ C8.3-1) = 0.0104 (2,500 SF)(3.25 in/hr) = 84.5 GAL/MIN
d_H=1.0" (ASCE 7-16, TABLE C8.3-1)
d_w=2" (DEPTH OF WATER UP TO SECONDARY DRAINAGE INLET)
R=5.2(d_H+d_w) (VUSBC 2018 EQ 16-36. DESIGN RAIN LOAD) = 5.2(2"+1.0") = 15.6 PSF

FOUNDATIONS

F-1: FOUNDATIONS FOR THIS STRUCTURE ARE SPREAD FOOTINGS BEARING ON EITHER VIRGIN SOIL OR CONTROLLED COMPACTED FILL WITH AN ASSUMED SOIL BEARING CAPACITY OF 2000 PSF.

F-2: THE OWNER'S GEOTECHNICAL ENGINEER SHALL VERIFY, PRIOR TO POURING CONCRETE, THAT THE SOIL IS CAPABLE OF SUPPORTING SUCH A LOAD.

F-3: THE CONTRACTOR SHALL PROTECT THE FOOTINGS AND SLABS FROM DAMAGE FROM FROST HEAVE DURING CONSTRUCTION UNTIL THE FINAL DESIGN STRUCTURE IS COMPLETE.

F-4: STEPS IN WALL FOOTINGS SHALL HAVE A MINIMUM SPACING OF DOUBLE THE CHANGE IN ELEVATION.

CONCRETE

C-1: ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301-10 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

PROJECT LOCATION	EXPOSURE CLASS	CONC WT	MIN F'c (PSI)	MAX W/CM RATIO	AIR CONTENT
EXT FDNS	F2	NW	4500	0.45	6.0% ± 1.5%
RAMP & PAVING	C2	NW	5000	0.40	6.0% ± 1.5%

C-2: STEEL REINFORCING OF CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS.

- ASTM A615 GRADE 60 (TYPICAL REINFORCING STEEL)
- ASTM A1064 (PLAIN WELDED WIRE FABRIC - USE FLAT SHEETS ONLY)

C-3: REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF DEPRESSIONS.

C-4: REFER TO ARCHITECTURAL DRAWINGS FOR FINISHES.

STRUCTURAL MASONRY

M-1: ALL MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF TMS 402/602-16 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES."

- ASTM C90 (BLOCK)
- ASTM C270 (MORTAR) - TYPE S (CMU), TYPE N (BRICK)
- ASTM C476 (GROUT) - 2000 PSI MINIMUM COMPRESSIVE STRENGTH
- f'_m=2000 PSI
- ASTM A615 GRADE 60 (REINFORCING)

M-2: SOLIDLY FILL COLLAR JOINTS WITH MORTAR AS THE WORK PROGRESSES.

M-3: PROVIDE STEEL SLEEVES AT PIPE PENETRATIONS (GALVANIZED AT ALL BELOW GRADE WALLS).

M-4: AT HOLLOW WALLS THAT CHANGE IN THICKNESS OR NUMBER OF WYTHES, PROVIDE A COURSE OF SOLID MASONRY OR GROUT FILLED UNITS BELOW THE TRANSITION.

M-5: ALL BLOCK CONTAINING VERTICAL REINFORCING SHALL HAVE TWO CELLS PER 16" BLOCK. CELLS SHALL ALIGN VERTICALLY AND BE GROUTED SOLID AT ALL REINFORCING LOCATIONS. BARS SHALL BE HELD IN PLACE BY REBAR POSITIONERS OR OTHER SUITABLE DEVICES AND SHALL BE CENTERED IN CMU UNO.

M-6: MASONRY JOINT REINFORCING SHALL BE PROVIDED IN ALL WALLS AT 16" OC MAXIMUM VERTICAL SPACING UNLESS INDICATED TO BE CLOSER TOGETHER ON SECTIONS AND DETAILS OF THE DRAWINGS. JOINT REINFORCING SHALL MEET ASTM A951 AND BE HOT-DIP-GALVANIZED AT EXTERIOR WALLS. MINIMUM WIRE DIAMETER FOR SIDE RODS AND CROSS RODS SHALL BE 0.148 INCHES UNLESS INDICATED TO BE GREATER IN SECTIONS AND DETAILS OF THE DRAWINGS. PROVIDE PREFABRICATED CORNER AND TEE UNITS FOR WALL INTERSECTIONS. LAP REINFORCING A MINIMUM OF 6 INCHES AT SPLICES.

M-7: IN VERTICALLY REINFORCED WALLS, USE LADDER TYPE (NOT TRUSS TYPE) REINFORCING IN HORIZONTAL MORTAR JOINTS.

M-8: GROUT SLUMP SHALL BE 8" TO 11". PLACE GROUT PER TMS 602 SECTION 3.5 AND CONSOLIDATE BY VIBRATION. RECONSOLIDATE BY VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

POST-INSTALLED ANCHORS

PA-1: ALL POST-INSTALLED ANCHORS (IN CONCRETE OR CMU) ARE TO BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (INCLUDING BUT NOT LIMITED TO DRILL BIT SIZE, PROPER CLEANING OF HOLES, INSTALLATION TORQUE, AND TEMPERATURE CONSTRAINTS).

PA-2: THE ANCHOR MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR TO REVIEW AND APPROVE OF THE CONTRACTOR'S INSTALLATION PROCEDURES. THE OWNER'S TESTING AGENCY SHALL ALSO OBSERVE THE INITIAL INSTALLATION OF EACH ANCHOR TYPE; AND PROVIDE THE INSPECTION OF ANCHORS DURING INSTALLATION TO VERIFY CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS. SUBMIT REPORT FROM MANUFACTURER'S REPRESENTATIVE FOR DUNBAR REVIEW. INSTALLATION OF ALL HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR APPROVED EQUIVALENT. SUBMIT CREDENTIALS OF CERTIFIED INSTALLERS. CONTINUOUS INSPECTION IS REQUIRED FOR ALL HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS. REMOVE AND REPLACE MISPLACED OR MALFUNCTIONING ANCHORS. FILL EMPTY ANCHOR HOLES AND PATCH FAILED ANCHOR LOCATIONS WITH HIGH-STRENGTH, NONMETALLIC GROUT.

PA-3: CHEMICAL ADHESIVE ANCHORING SYSTEMS USED IN SOLID OR GROUTED MASONRY GENERICALLY REFERRED TO AS ADHESIVE ANCHORING SYSTEMS SHALL BE ONE OF:

1. SET XP BY SIMPSON STRONG TIE
2. HIT-HY 270 BY HILTI
3. AC100+ GOLD BY DEWALT

PA-4: CHEMICAL ADHESIVE ANCHOR SYSTEMS FOR USE WITH REINF STEEL IN CONCRETE SHALL BE ONE OF:

- SET-3G BY SIMPSON STRONG-TIE
- HIT-RE 500-V3 BY HILTI
- HIT-HY 200 BY HILTI

UNLESS NOTED OTHERWISE, REINFORCING STEEL USED WITH THESE SYSTEMS SHALL BE ASTM A615 GRADE 60.

ABBREVIATIONS

AFF	= ABOVE FINISHED FLOOR
ARCH	= ARCHITECTURAL
BLDG	= BUILDING
BOT	= BOTTOM
BRG	= BEARING
CIP	= CAST-IN-PLACE
CJ	= CONTROL JOINT
CL	= CENTERLINE
CLR	= CLEAR
CLSM	= CONTROLLED LOW-STRENGTH MATERIAL
CMU	= CONCRETE MASONRY UNIT
COL	= COLUMN
CONC	= CONCRETE
CONN	= CONNECTION
CONT	= CONTINUOUS
COORD	= COORDINATE
DET	= DETAIL
DIM	= DIMENSION
DL	= DEAD LOAD
DN	= DOWN
DWGS	= DRAWINGS
EA	= EACH
EL	= ELEVATION
EOS	= EDGE OF SLAB
EQ	= EQUAL
EX	= EXISTING
EXT	= EXTERIOR
FFE	= FINISHED FLOOR ELEVATION
FLR	= FLOOR
FTG	= FOOTING
GC	= GENERAL CONTRACTOR
HK	= HOOK
HORIZ	= HORIZONTAL
HS	= HIGH STRENGTH
HT	= HEIGHT
INT	= INTERIOR
JT	= JOINT
LBS	= POUNDS
LL	= LIVE LOAD
MAS	= MASONRY
MAX	= MAXIMUM
MECH	= MECHANICAL
MFR	= MANUFACTURER
MISC	= MISCELLANEOUS
MIN	= MINIMUM
NO.	= NUMBER
NTS	= NOT TO SCALE
NW	= NORMAL WEIGHT
OC	= ON CENTER
PLF	= POUNDS PER LINEAR FOOT
PSF	= POUNDS PER SQUARE FOOT
PSI	= POUNDS PER SQUARE INCH
REF	= REFERENCE
REINF	= REINFORCING
REQD	= REQUIRED
SECT	= SECTION
SIM	= SIMILAR
SOG	= SLAB-ON-GROUND
SPA	= SPACE
STD	= STANDARD
TOC	= TOP OF CONCRETE
TYP	= TYPICAL
UNO	= UNLESS NOTED OTHERWISE
VERT	= VERTICAL
WWF	= WELDED WIRE FABRIC

QUALITY ASSURANCE NOTES

CAST-IN-PLACE CONCRETE

QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT.
1. MANUFACTURER CERTIFIED ACCORDING TO NRMCA'S "CERTIFICATION OF READY MIXED CONCRETE PRODUCTION FACILITIES."

B. TESTING AGENCY QUALIFICATIONS: AN INDEPENDENT AGENCY, ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, QUALIFIED ACCORDING TO ASTM C 1077 AND ASTM E 329 FOR TESTING INDICATED.
1. PERSONNEL CONDUCTING FIELD TESTS SHALL BE QUALIFIED AS ACI CONCRETE FIELD TESTING TECHNICIAN, GRADE 1, ACCORDING TO ACI CP-1 OR AN EQUIVALENT CERTIFICATION PROGRAM.
2. PERSONNEL PERFORMING LABORATORY TESTS SHALL BE AC -CERTIFIED CONCRETE STRENGTH TESTING TECHNICIAN AND CONCRETE LABORATORY TESTING TECHNICIAN, GRADE I. TESTING AGENCY LABORATORY SUPERVISOR SHALL BE AN ACI-CERTIFIED CONCRETE LABORATORY TESTING TECHNICIAN, GRADE II.

C. SOURCE LIMITATIONS: OBTAIN EACH TYPE OR CLASS OF CEMENTITIOUS MATERIAL OF THE SAME BRAND FROM THE SAME MANUFACTURER'S PLANT. OBTAIN AGGREGATE FROM SINGLE SOURCE, AND OBTAIN ADMIXTURES THROUGH SINGLE SOURCE FROM A SINGLE MANUFACTURER.

D. ACI PUBLICATIONS: COMPLY WITH THE FOLLOWING UNLESS MODIFIED BY REQUIREMENTS IN THE CONTRACT DOCUMENTS.
1. ACI 301
2. ACI 117

E. CONCRETE TESTING SERVICES: ENGAGE A QUALIFIED INDEPENDENT TESTING AGENCY TO PERFORM MATERIAL EVALUATION TESTS AND TO DESIGN CONCRETE MIXTURES.

F. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.
1. BEFORE SUBMITTING DESIGN MIXTURES, REVIEW CONCRETE DESIGN MIXTURES AND EXAMINE QUALITY OF CONCRETE MATERIALS. REQUIRE REPRESENTATIVES OF EACH ENTITY DIRECTLY CONCERNED WITH CAST-IN-PLACE CONCRETE TO ATTEND, INCLUDING THE FOLLOWING:
   a. CONTRACTOR'S SUPERINTENDENT
   b. INDEPENDENT TESTING AGENCY RESPONSIBLE FOR CONCRETE DESIGN TESTS.
   c. READY-MIX CONCRETE MANUFACTURER.
   d. CONCRETE SUBCONTRACTOR.
2. REVIEW SPECIAL INSPECTION AND TESTING AND INSPECTING AGENCY PROCEDURES FOR FIELD QUALITY CONTROL, CONCRETE FINISHES AND FINISHING, COLD- AND HOT-WEATHER CONCRETING PROCEDURES, CURING PROCEDURES, CONSTRUCTION CONTRACTION AND ISOLATION JOINTS, BOND-BREAK MATERIALS, STEEL REINFORCEMENT INSTALLATION, FLOOR AND SLAB FLATNESS AND LEVELNESS MEASUREMENT, CONCRETE REPAIR PROCEDURES, AND CONCRETE PROTECTION.

G. SHOP DRAWINGS:
1. PROVIDE DESIGN MIXTURES FOR EACH CONCRETE MIX. INDICATE AMOUNT OF WATER TO BE WITHHELD FOR LATER ADDITION AT PROJECT SITE. INDICATE WHERE EACH MIX SHALL BE USED.
2. PROVIDE STEEL REINFORCEMENT SHOP DRAWINGS. INCLUDE PLACING DRAWINGS THAT DETAIL FABRICATION, BEND, AND PLACEMENT. INDICATE BAR SIZES, LENGTH, MATERIAL, GRADE, BAR SCHEDULE, STIRRUP SPACING, BENT BAR DIAGRAMS, SPLICES AND LAPS, MECHANICAL CONNECTIONS, AND STIRRUP AND TIE SPACING.

FIELD QUALITY CONTROL

A. TESTING AND SPECIAL INSPECTIONS: OWNER WILL ENGAGE A SPECIAL INSPECTOR AND QUALIFIED TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS AND PREPARE TEST REPORTS.

B. INSPECTIONS:
1. STEEL REINFORCEMENT PLACEMENT.
2. VERIFICATION OF USE OF REQUIRED DESIGN MIXTURE.
3. CONCRETE PLACEMENT, INCLUDING CONVEYING AND DEPOSITING.
4. CURING PROCEDURES AND MAINTENANCE OF CURING TEMPERATURE.
5. POST-INSTALLED ANCHOR INSTALLATION.

C. CONCRETE TESTS: TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C 172/C 172M, AS MODIFIED IN THESE SPECIFICATIONS, SHALL BE PERFORMED ACCORDING TO THE FOLLOWING REQUIREMENTS:
1. TESTING FREQUENCY: OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF.
2. SLUMP: ASTM C 143/C 143M; ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
3. AIR CONTENT: ASTM C 231/C 231M, PRESSURE METHOD, FOR NORMAL-WEIGHT CONCRETE; ONE TEST FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE.
4. CONCRETE TEMPERATURE: ASTM C 1064/C 1064M; ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW OR 80 DEG F AND ABOVE, AND ONE TEST FOR EACH COMPOSITE SAMPLE.
5. COMPRESSION TEST SPECIMENS: ASTM C 31/C 31M. SAMPLES SHALL BE TAKEN FROM CONCRETE PUMP DISCHARGE HOSE WHEN CONCRETE IS TRANSPORTED BY CONCRETE TRUCK.
   a. CAST AND LABORATORY CURE ONE SET OF SIX 4 X 8 CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
6. COMPRESSIVE-STRENGTH TESTS: ASTM C 39/C 39M
   a. 4 X 8 SPECIMENS: TEST TWO LABORATORY-CURED SPECIMENS AT 7 DAYS AND ONE SET OF THREE SPECIMENS AT 28 DAYS. TEST ONE SPECIMEN AT 56 DAYS IF REQUIRED.
   b. A COMPRESSIVE STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED
7. WHEN STRENGTH OF FIELD-CURED CYLINDERS IS LESS THAN 85 PERCENT OF COMPANION LABORATORY-CURED CYLINDERS, CONTRACTOR SHALL EVALUATE OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING IN-PLACE CONCRETE.
8. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TESTS EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE-STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.
9. TEST RESULTS SHALL BE REPORTED IN WRITING TO ARCHITECT, CONCRETE MANUFACTURER, AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE-STRENGTH TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE BATCH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7- AND 28-DAY TESTS.
10. NONDESTRUCTIVE TESTING: IMPACT HAMMER, SONOSCOPE, OR OTHER NONDESTRUCTIVE DEVICE MAY BE PERMITTED BY ARCHITECT BUT WILL NOT BE USED AS SOLE BASIS FOR APPROVAL OR REJECTION OF CONCRETE.
11. ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ARCHITECT. TESTING AND INSPECTING AGENCY MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CONCRETE BY CORED CYLINDERS COMPLYING WITH ASTM C 42/C 42M OR BY OTHER METHODS AS DIRECTED BY ARCHITECT.
12. ADDITIONAL TESTING AND INSPECTING: AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.
13. CORRECT DEFICIENCIES IN THE WORK THAT TEST REPORTS AND INSPECTIONS INDICATE DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.

UNIT MASONRY

QUALITY ASSURANCE

A. TESTING AGENCY QUALIFICATIONS: QUALIFIED ACCORDING TO ASTM C 1093 FOR TESTING INDICATED.

B. SOURCE LIMITATIONS FOR MASONRY UNITS: OBTAIN EXPOSED MASONRY UNITS OF A UNIFORM TEXTURE AND COLOR, OR A UNIFORM BLEND WITHIN THE RANGES ACCEPTED FOR THESE CHARACTERISTICS, THROUGH ONE SOURCE FROM A SINGLE MANUFACTURER, FOR EACH PRODUCT OBTAINED.

C. SOURCE LIMITATIONS FOR MORTAR MATERIALS: OBTAIN MORTAR INGREDIENTS OF A UNIFORM QUALITY, INCLUDING COLOR FOR EXPOSED MASONRY, FROM A SINGLE MANUFACTURER FOR EACH CEMENTITIOUS COMPONENT AND FROM ONE SOURCE OR PRODUCER FOR EACH AGGREGATE.

D. PRECONSTRUCTION TESTING SERVICES: OWNER WILL ENGAGE A QUALIFIED INDEPENDENT TESTING AGENCY TO PERFORM PRECONSTRUCTION TESTING INDICATED BELOW. RETESTING OF MATERIALS THAT FAIL TO COMPLY WITH SPECIFIED REQUIREMENTS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
1. CLAY MASONRY UNIT TEST: FOR EACH TYPE OF UNIT REQUIRED, PER ASTM C 67.
2. CONCRETE MASONRY UNIT TEST: FOR EACH TYPE OF UNIT REQUIRED, PER ASTM C 140.

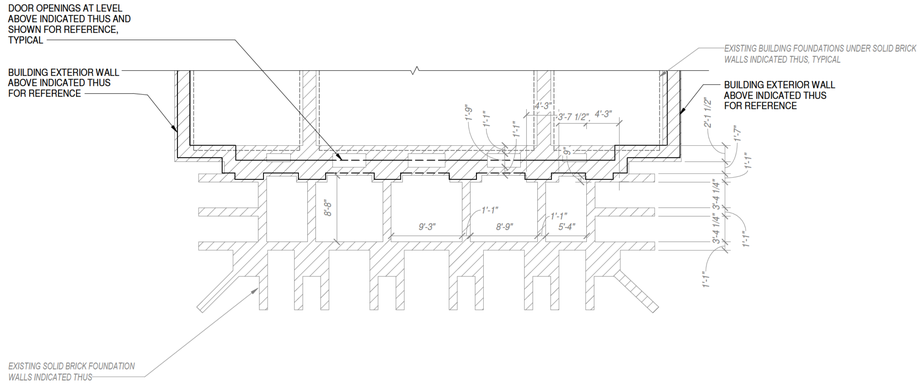
E. SHOP DRAWINGS: SHOW MASONRY UNIT SIZES, PROFILES, COURSING, AND LOCATION OF SPECIAL SHAPES. PROVIDE REINFORCING STEEL DETAILS INCLUDING BENDING, LAP LENGTHS, AND PLACEMENT OF REINFORCEMENT BARS. ALL SHALL COMPLY WITH ACI 315.

FIELD QUALITY CONTROL

A. TESTING AND INSPECTING: OWNER WILL ENGAGE SPECIAL INSPECTORS TO PERFORM TESTS AND INSPECTIONS AND PREPARE REPORTS. ALLOW INSPECTORS ACCESS TO SCAFFOLDING AND WORK AREAS AS NEEDED TO PERFORM TESTS AND INSPECTIONS. RETESTING OF MATERIALS THAT FAIL TO COMPLY WITH SPECIFIED REQUIREMENTS SHALL BE DONE AT CONTRACTOR'S EXPENSE.

B. INSPECTIONS: SPECIAL INSPECTIONS ACCORDING TO TMS 402/ACI 530/ASCE 5.
1. BEGIN MASONRY CONSTRUCTION ONLY AFTER INSPECTORS HAVE VERIFIED PROPORTIONS OF SITE-PREPARED MORTAR.
2. PLACE GROUT ONLY AFTER INSPECTORS HAVE VERIFIED COMPLIANCE OF GROUT SPACES AND OF GRADES, SIZES, AND LOCATIONS OF REINFORCEMENT.

C. THE OWNER'S INDEPENDENT TESTING/INSPECTION AGENCY SHALL INSPECT THE MASONRY CONSTRUCTION DURING VARIOUS WORK STAGES FOR COMPLIANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS, AND KEEP RECORDS WHICH COVER THE FOLLOWING:
1. QUALITY AND TESTING OF MASONRY UNITS.
2. PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT. LAYING, MORTARING, AND GROUTING OF MASONRY UNITS AND ELEMENTS.
3. CONDITION, GRADE, SIZE, SPACING AND PLACEMENT OF REINFORCEMENT.
4. ANY SIGNIFICANT OR UNUSUAL CONSTRUCTION LOADS ON MASONRY STRUCTURAL ELEMENTS.
5. GENERAL PROGRESS OF WORK
6. WHEN AMBIENT TEMPERATURE FALLS BELOW 40 DEG F OR RISES ABOVE 100 DEG F, A COMPLETE RECORD OF WEATHER CONDITIONS AND OF PRECONDITIONING AND PROTECTION GIVEN TO MASONRY MATERIALS AND PROTECTION AND CURING OF COMPLETED WORK SHALL BE MAINTAINED.
7. INSPECTION RECORDS SHALL BE FURNISHED TO BUILDING OFFICIAL, OWNER AND ARCHITECT/ENGINEER DURING PROGRESS OF THE WORK.
8. THE INSPECTOR SHALL NOT SUPERVISE THE CONSTRUCTION; HOWEVER, THEY SHALL VISIT THE PROJECT WITH THE FREQUENCY NECESSARY TO OBSERVE THE VARIOUS STAGES OF WORK AND LONG ENOUGH AT EACH VISIT TO ASCERTAIN THAT IT IS BEING DONE IN COMPLIANCE WITH THE CONTRACT DOC



EXISTING BASEMENT AND FOUNDATION PLAN

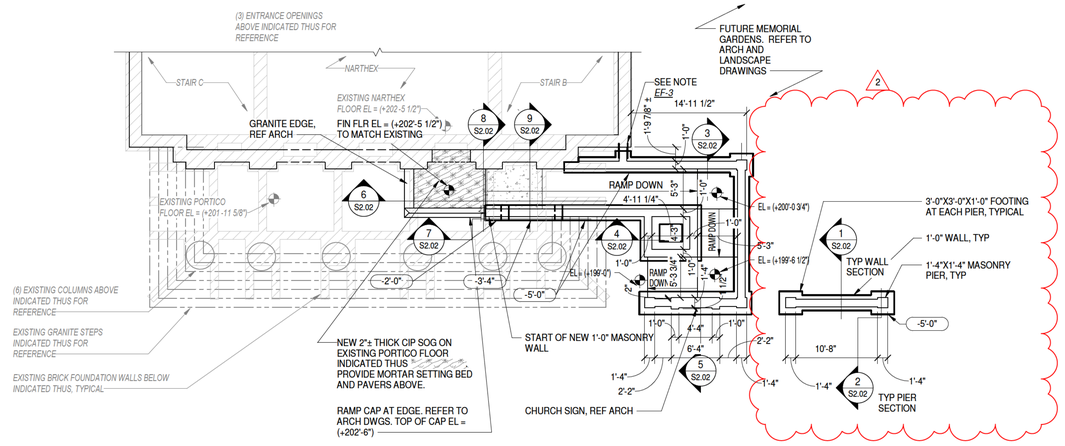
1/8" = 1'-0"

FD-1: TYPICAL SLAB-ON-GROUND SHALL BE 4" NORMAL WEIGHT CONCRETE WITH 6X6-W1.4XW1.4 WWF AT MID-DEPTH, OVER 4" POROUS FILL

FD-2: TOP OF FOOTING ELEVATIONS INDICATED THUS (0'-0") RELATIVE TO TYPICAL FIRST FLOOR ELEVATION XXX'-X".

FD-3: FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO THE CONSTRUCTION OF ANY NEW STRUCTURAL MEMBERS.

FD-4: ALL INFORMATION INDICATED AS EXISTING DETERMINED FROM DRAWINGS NOLAND & BASKERVILL ARCHITECTS DATED JULY 1911.



NARTHEX AND NEW RAMP PLAN

1/8" = 1'-0"

EF-1: EXISTING NARTHEX FIRST FLOOR ELEVATION = 202'-4"±.

EF-2: FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO THE CONSTRUCTION AND FABRICATION OF ANY NEW STRUCTURAL MEMBERS.

EF-3: PROVIDE (2) #5X1'-6" WHERE INDICATED. POST-INSTALL 6" INTO EXISTING MASONRY WALL. CENTER IN FOOTING.

EF-4: BOTTOM OF NEW FOOTING ELEVATION INDICATED THUS (-X'-XX") RELATIVE TO EXISTING PORTICO FINISH FLOOR ELEVATION OF 201'-11 5/8".

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PROJECT TITLE

ST. JAMES'S RAMP AND ROAD PROJECT

St. James's Episcopal Church

1205 W FRANKLIN STREET, RICHMOND, VA 23220

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By
Taylor & Parrish
Dated: September 5, 2024

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COMMONWEALTH OF VIRGINIA
DONNA E. ADAMS
Lic. No. 040150
05/31/2024
PROFESSIONAL ENGINEER

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

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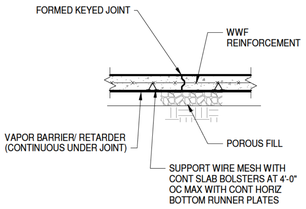
REVISIONS

NO.	DATE	DESCRIPTION
	MAY 31, 2024	PERMIT SET
2	07/24/2024	Revision 2

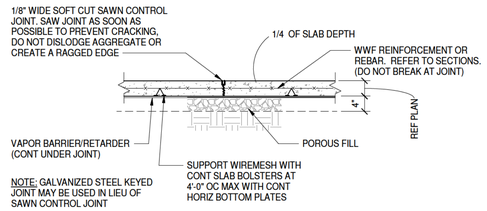
SHEET TITLE
EXISTING BASEMENT AND NEW RAMP PLANS

SHEET NUMBER
S1.01

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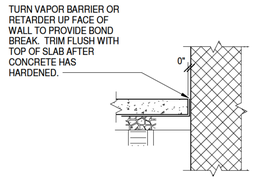
TYPICAL SLAB-ON-GROUND CONSTRUCTION JOINT DETAIL
3/4"=1'-0"



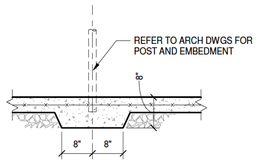
TYPICAL SLAB-ON-GROUND AND CONTROL JOINT DETAIL
3/4"=1'-0"

JOINT PLACEMENT GUIDELINE

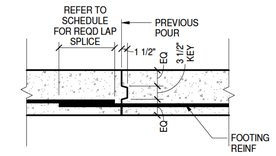
A. LOCATE CONTROL JOINTS AND/ OR CONSTRUCTION JOINTS AT
   1. RE-ENTRANT CORNERS OF SLAB
   2. AT CORNERS OF INTERIOR MASONRY WALLS WITH FOOTINGS
B. SPACE JOINTS NO MORE THAN THE FOLLOWING:
   1. 12 FEET APART
C. SUBDIVIDE SLAB AREAS TO LIMIT LENGTH TO WIDTH RATIO OF SLAB AREA TO 2 TO 1 MAXIMUM. PROVIDE SQUARE SLAB AREAS WHERE PRACTICAL.
D. IN ADDITION TO GUIDELINES ABOVE, COORDINATE CONTROL JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.



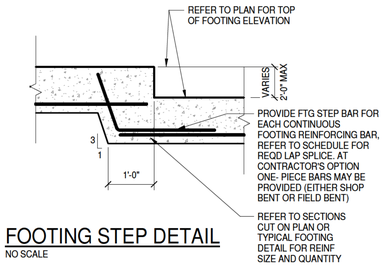
TYPICAL BOND BREAK AT SLAB-ON-GROUND
3/4"=1'-0"



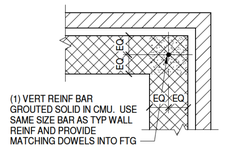
TYPICAL SLAB-ON-GROUND DETAIL AT EMBEDDED HANDRAIL POST
3/4"=1'-0"



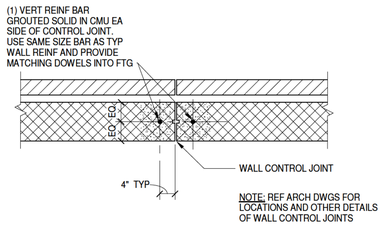
CONTINUOUS WALL FOOTING CONSTRUCTION JOINT (ELEVATION VIEW)
NO SCALE



FOOTING STEP DETAIL
NO SCALE



TYPICAL DETAIL AT CORNER OF EXTERIOR WALL
3/4" = 1'-0"



TYPICAL DETAIL AT CONTROL JOINT THROUGH CMU AT EXTERIOR WALL
3/4" = 1'-0"

TYPICAL WALL REINFORCING PLAN DETAILS

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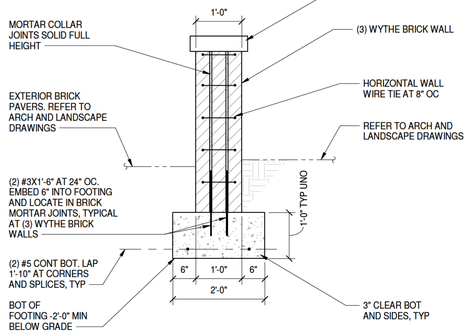
REVISIONS

NO.	DATE	DESCRIPTION
	MAY 31, 2024	PERMIT SET

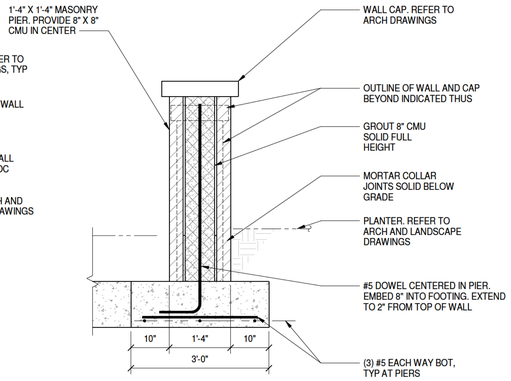
SHEET TITLE
TYPICAL DETAILS

SHEET NUMBER
S2.01

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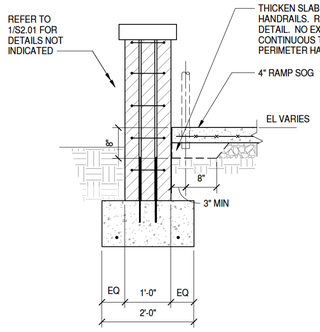


SECTION 1 — 3/4" = 1'-0" — S1.01 | S2.02

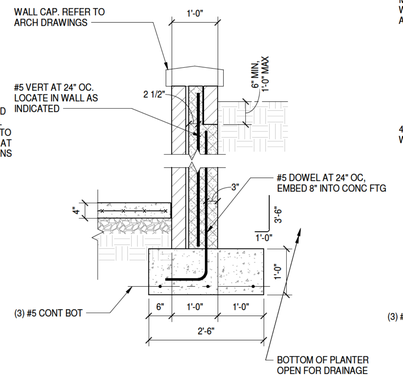


TYPICAL PIER SECTION

SECTION 2 — 3/4" = 1'-0" — S1.01 | S2.02

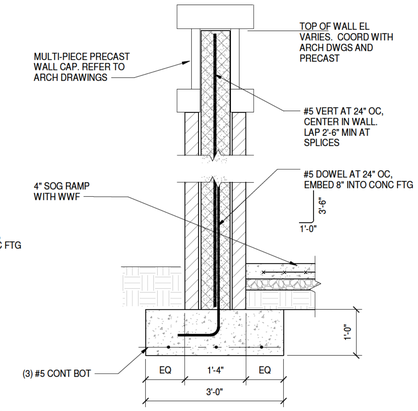


SECTION 3 — 3/4" = 1'-0" — S1.01 | S2.02

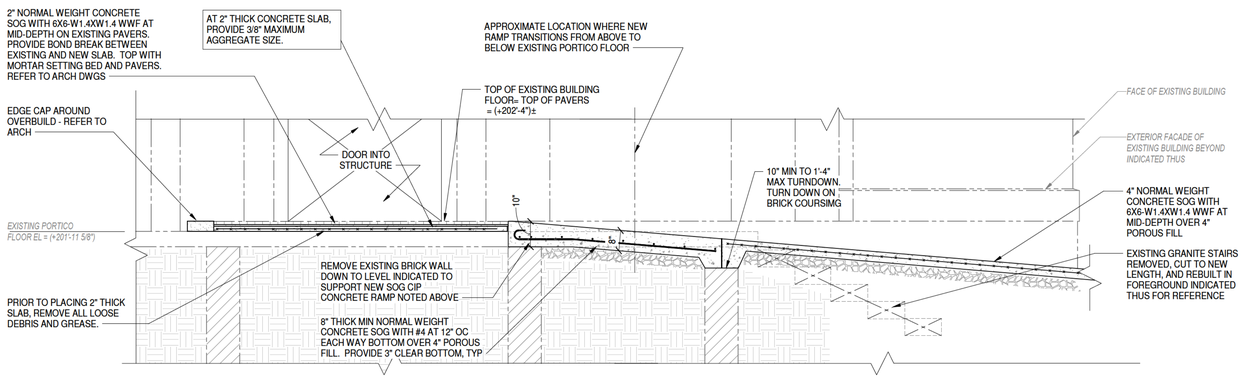


TYPICAL PLANTER WALL SECTION

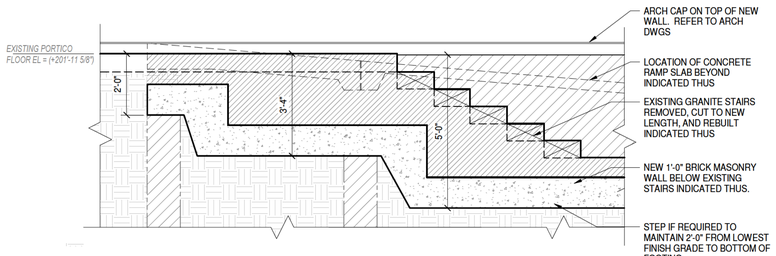
SECTION 4 — 3/4" = 1'-0" — S1.01 | S2.02



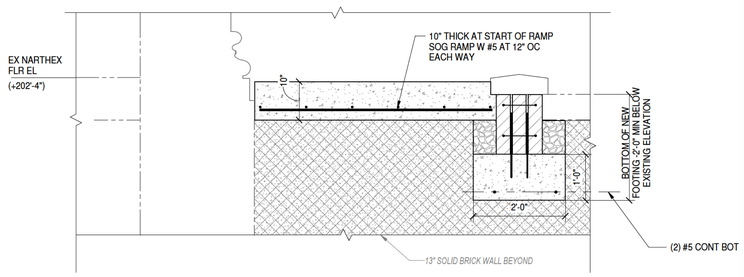
SECTION 5 — 3/4" = 1'-0" — S1.01 | S2.02



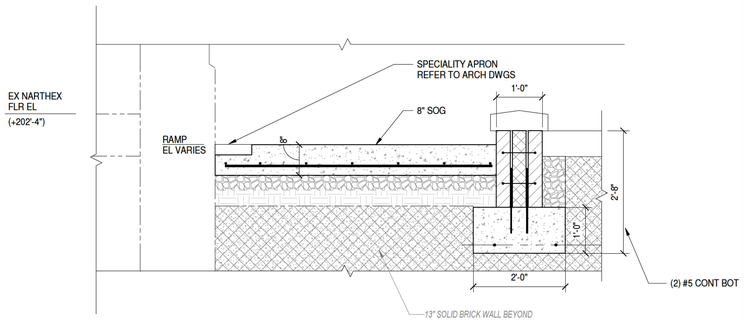
SECTION 6 — 1/2" = 1'-0" — S1.01 | S2.02



SECTION 7 — 1/2" = 1'-0" — S1.01 | S2.02



SECTION 8 — 3/4" = 1'-0" — S1.01 | S2.02



SECTION 9 — 3/4" = 1'-0" — S1.01 | S2.02

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ST. JAMES'S RAMP AND ROAD PROJECT

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PROFESSIONAL ENGINEER

PROJECT NUMBER
G&HA#: 23028

DATE
MAY 31, 2024

DRAWN BY: GPC CHECKED BY: DEA

REVISIONS

NO.	DATE	DESCRIPTION
	MAY 31, 2024	PERMIT SET

SHEET TITLE
RAMP FOUNDATION AND FLOOR SECTIONS

SHEET NUMBER
S2.02

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