

C:\Users\yasson\OneDrive - Berkowsky and Associates, Inc\General - BAL\_Design\The College of New Jersey\22058 Forcina Parking Garage Repairs\04\_CD's\01\_CAD-REVIT\00\_CadRevit\_Current\_Scope Reduct01\_Arch\01\_22058\_OS\_COVER SHEET.dwg 12/13/23 - 2:45pm

GENERAL NOTES - EXISTING CONDITIONS PROTECTION

- ALL EXISTING WALL, FLOOR AND CEILING-MOUNTED FIXTURES, EQUIPMENT, ENCLOSURES AND CONDUIT, AS WELL AS DOORWAYS, WINDOWS AND VENTS (EQUIPMENT AND FENESTRATIONS), SHALL BE PROTECTED DURING ALL CONSTRUCTION ACTIVITIES. PROTECTION SHALL BE AFFORDED AGAINST DAMAGE, DISLODGING, DISTURBANCE, MOVING OR DISCONNECTING, SCRAPING OR SCRATCHING, DUST AND DEBRIS. PROTECTION SHALL PREVENT CONTAMINATION OR INTRUSION BY ANY FOREIGN MATERIAL OR RESIDUE SUCH AS DUST, DIRT, WATER OR MOISTURE, SOLVENT, SLURRY, COATING, SEALANT, ADHESIVE, OR PAINT.
- EQUIPMENT TYPES OF CONCERN INCLUDE BUT ARE NOT LIMITED TO: TELEPHONE EQUIPMENT AND CABLES; ELECTRICAL, ELECTRONICS AND ALARM PANELS; ELECTRONICS FOR SAFETY AND SECURITY; FIXTURES FOR LIGHTING AND SAFETY; FIRE ALARM ACTIVATION AND NOTIFICATION STATIONS; TERMINALS, CABLES, RECEPTACLES AND FIXTURES OF ELECTRICAL NATURE; COOLING AND VENTILATION EQUIPMENT; VALVES AND FITTINGS; CONDUITS AND ENCLOSURES.
- FENESTRATION TYPES OF CONCERN INCLUDE, BUT ARE NOT LIMITED TO: BUILDING DOORWAYS AND WINDOW SILLS, SASHES AND FRAMES; ELEVATOR DOORS, CARS, SILLS AND FRAMES; VENTILATION LOUVERS.
- EQUIPMENT AND APPURTENANCES THAT REQUIRE DISCONNECTION OR REMOVAL SHALL BE IDENTIFIED WITHIN ONE WEEK OF THE PRE-CONSTRUCTION MEETING. A COORDINATED AND AGREED-UPON SCHEDULE FOR REMOVAL AND REINSTALLATION SHALL BE ESTABLISHED WITH THE OWNER. ELEMENTS IDENTIFIED AFTER THAT POINT IN THE PROJECT TIMELINE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER; ADDITIONAL TIME SHALL BE AFFORDED TO THE OWNER TO SECURE NECESSARY RESOURCES TO COMPLETE EQUIPMENT REMOVAL AND REINSTALLATION.
- CONTRACTOR SHALL BE MINDFUL OF MOVEMENT, MIGRATION OR TRANSFER OF LIQUIDS AND DUSTS FROM WORK OR APPLICATION AT HIGHER AREAS, POINTS OR LEVELS, TO LOWER AREAS, POINTS OR LEVELS, SUCH AS BY DRIPPING, WEEPING, LEAKING, BLEEDING OR SOAKING; IN THE CASE OF DRY MATERIALS, BY DRAFT, GRAVITY, OR AIR CURRENTS (NATURAL OR MECHANICALLY-INDUCED).
- PROTECTION METHODS FOR CONSIDERATION BY THE CONTRACTOR SHALL INCLUDE BUT ARE NOT LIMITED TO: DISCONNECTION AND REMOVAL BY A QUALIFIED CONTRACTOR; COVERING OR SEALING WITH HEAVY GAUGE SHEET PLASTIC AND ADHESIVE TAPE (TAPE ATTACHED TO PLASTIC SHEETING); INSTALLATION OF TEMPORARY, PHYSICAL GUARD ENCLOSURES. CHOICE OF METHOD AND MATERIALS SHALL CONSIDER CONSTRUCTION ACTIVITIES AND POSSIBLE MATERIAL EXPOSURES, AS WELL AS FUTURE REMOVAL.
- PROTECTION METHODS SHALL BE REVIEWED IN COORDINATION WITH THE OWNER; OWNER RESERVES THE RIGHT TO REJECT A PROPOSED SOLUTION AND DEMAND AN ALTERNATIVE. THE OWNER SHALL IN NO CASE BE RESPONSIBLE FOR THE PROTECTION MEANS AND METHODS, THE RESPONSIBILITY FOR INSTALLATION, REMOVAL AND PERFORMANCE OF PROTECTION SYSTEMS SHALL REMAIN SOLELY WITH THE CONTRACTOR.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO INSPECT EQUIPMENT AND FENESTRATIONS PRIOR TO INSTALLING PROTECTION MEASURES, IN ORDER TO VERIFY EXISTING CONDITIONS. CONTRACTOR IS RECOMMENDED TO PHOTO-DOCUMENT EXISTING CONDITIONS THAT ARE, IN EITHER PARTY'S OPINION, EVIDENCE OF EXISTING DAMAGE OR CONTAMINATION. ALL DOCUMENTATION SUBSTANTIATING CLAIMS OF EXISTING DAMAGE SHALL BE DATE-STAMPED AND SUBMITTED TO THE OWNER PRIOR TO COMMENCEMENT OF WORK; UNDATED DOCUMENTATION AND/OR DOCUMENTATION PRESENTED AFTER THE FACT WILL NOT BE CONSIDERED.
- REMOVAL OF PROTECTION ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE EXECUTED FOLLOWING THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES INTENDED TO PROTECT AGAINST, THIS INCLUDES WORK UNDER CHANGE ORDER OR OTHERWISE DELAYED. ANY RESIDUES FROM ADHESIVES SHALL BE CLEANED FROM EQUIPMENT AND FENESTRATIONS. CLEANERS SHALL BE COMPATIBLE WITH THE SURFACES TO BE CLEANED.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO INSPECT EQUIPMENT AND FENESTRATIONS FOLLOWING REMOVAL OF PROTECTION.
- EQUIPMENT AND FENESTRATIONS FOUND BY EITHER OWNER, OR BY CONTRACTOR, TO BE DAMAGED SHALL BE REPLACED WITH EXACT PRODUCT. REPLACEMENT WITH "EQUIVALENT" SHALL BE APPROVED SOLELY AT OWNER'S DISCRETION. REPLACEMENT SHALL BE TO CURRENT CODE AND CAMPUS STANDARDS. CONTRACTOR IS SOLELY RESPONSIBLE FOR MATERIAL AND LABOR COSTS FOR REPLACEMENT. REPLACEMENT SHALL BE BY OWNERS PREFERRED, CERTIFIED CONTRACTOR FOR THE WORK REQUIRED.
- CONTRACTOR SHALL ATTEND PRE-CONSTRUCTION WALK-THROUGH TO JOINTLY IDENTIFY EQUIPMENT AND FENESTRATIONS TO BE PROTECTED. FAILURE TO IDENTIFY COMPONENTS TO PROTECT DOES NOT ABSOLVE OR RELIEVE CONTRACTOR OF THE RESPONSIBILITIES AND COSTS DESCRIBED IN THIS SECTION.



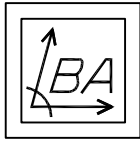
# FORCINA PARKING GARAGE REPAIRS

## METZGER DR. EWING, NJ 08628

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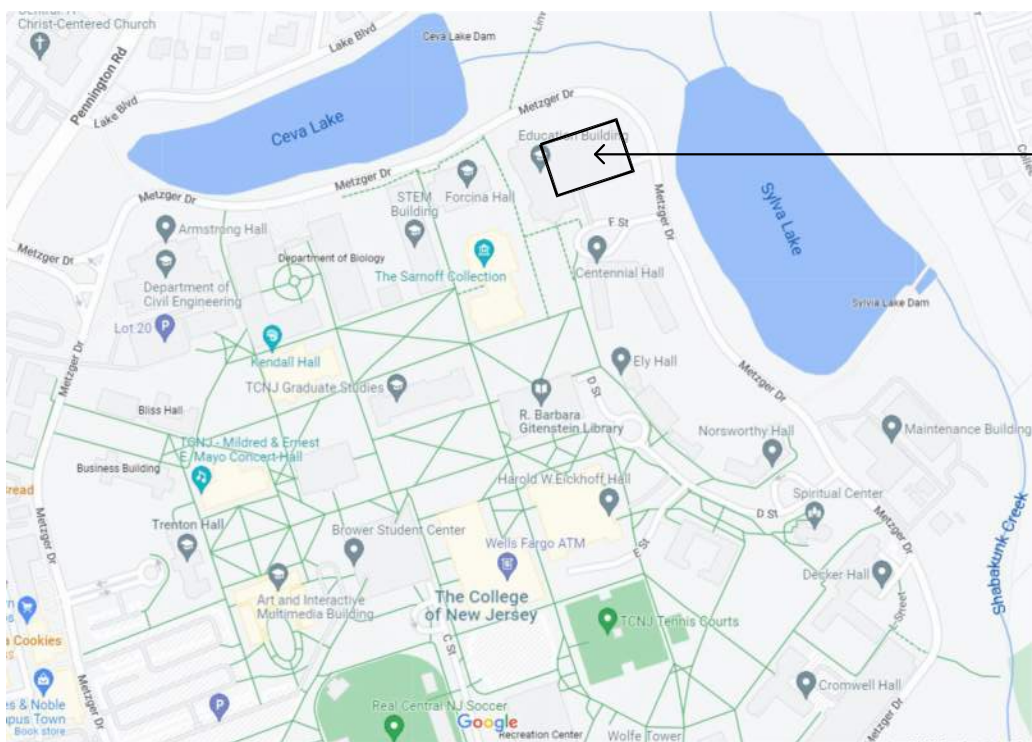


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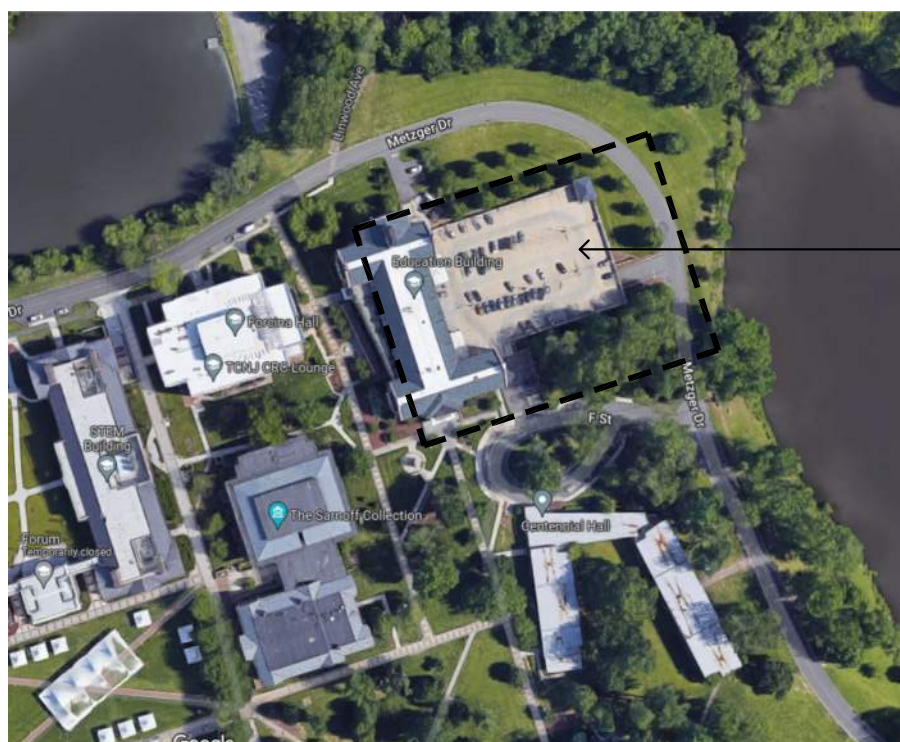
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LOCATION MAP



SITE MAP

ABBREVIATIONS

ACT	ACOSTICAL CEILING TILE
A.F.F.	ABOVE FINISHED FLOOR
C.J.	CONTROL JOINT
CLC	CEILING
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CONTR.	CONTRACTOR
DIA.	DIAMETER
E.J.	EXPANSION JOINT
ELECT. / OR ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
ETC.	ETCETERA (AND SO ON)
E.T.R.	EXISTING TO REMAIN
EXIST.	EXISTING
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
FIN. FL.	FINISH FLOOR
F.P.	FILLER PANEL
F.R.	FIRE RESISTANT
G.C.	GENERAL CONTRACTOR
GALV.	GALVANIZED
HCW	HOT/COLD WATER
H.M.	HOLLOW METAL
HT.	HEIGHT
H.P.	HIGH POINT
INSUL.	INSULATION
KS	KNEE SPACE
L.P.	LOW POINT
MAX.	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
MT	MARBLE TABLE
SIM	SIMILAR
S.O.G.	SLAB ON GRADE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.L.	UNDERWRITER'S LAB
U.O.N.	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
V.I.F.	VERIFY IN FIELD
W.C.	WATER COOLER

SYMBOLS LEGEND

OFFICE 101	ROOM NUMBER
XX	DEMOLITION NOTE
X	WORK NOTE
SECTION/ELEVATION REFERENCE REFERENCE DRAWING NUMBER	
DETAIL REFERENCE REFERENCE DRAWING NUMBER	
EXISTING WALL	
WALL TO BE REMOVED	
NEW WALL C.M.U.	
NEW WALL G.W.B.	
EXISTING DOOR TO REMAIN	
EXISTING DOOR TO BE REMOVED	
NEW DOOR	

MATERIAL SYMBOLS

EARTH: DISTURBED	
EARTH: BACKFILL	
BATT OR BLOWN INSULATION	
RIGID INSULATION	
METAL, ALUMINUM, ETC.	
WOOD: FINISH	
WOOD: ROUGH	
WOOD: BLOCKING	
PLYWOOD: LARGE SCALE	
RESILIENT FLOORING	
CARPET AND PAD	
CERAMIC TILE: LARGE SCALE	
GLASS: LARGE SCALE	
GLASS: SMALL SCALE	
STEEL	
PLASTER CEMENT, SAND, GROUT	
BRICK	
CONCRETE MASONRY UNIT	
CAST IN PLACE OR PRE-CAST CONCRETE	
CRUSHED STONE, GRAVEL OR POROUS FILL	
PLYWOOD: SMALL SCALE	
GYPSUM WALL BOARD	

CODE REVIEW

AUTHORITY HAVING JURISDICTION:	THE STATE OF N.J. / DCA
APPLICABLE CODES:	NEW JERSEY UNIFORM CONSTRUCTION CODE / REHABILITATION SUBCODE 5:23-6 W/ LATEST AMENDMENTS
REHABILITATION SUBCODE REFERENCE CODES:	
BUILDING SUBCODE (NJAC 5:23-3.14) - INTERNATIONAL BUILDING CODE/2021, N.J. ed (IBC W/NJ EDITS FROM 3.14)	
PLUMBING CODE (NJAC 5:23-3.15) - NATIONAL STANDARD PLUMBING CODE 2021, NJ ed (NSPC W/NJ EDITS FROM 3.15)	
ELECTRICAL SUBCODE (NJAC 5:23-3.16) - NATIONAL ELECTRICAL CODE (NFPA 70) 2020	
MECHANICAL SUBCODE (NJAC 5:23-3.20) - INTERNATIONAL MECHANICAL CODE 2021	
BARRIER FREE SUBCODE (CHAPTER 11 OF IBC 2021 & NJAC 5:23-7) - ICC/ANSI A117.1-2017	
CATEGORY OF WORK: PER UCC 5:23-6:	
REPAIRS	SEC. 6.4
RENOVASTIONS	SEC. 6.5
MATERIALS AND METHODS	SEC. 6.8
NEW BUILDING ELEMENTS	SEC. 6.9
BASIC AND SUPP. REQ.	SEC. 6.10 THROUGH 6.30
USE GROUP:	
EXISTING:	S-2 PARKING GARAGE
NEW WORK AREA:	
PROJECT AREA:	39,200 SF PER FLOOR
CONSTRUCTION TYPE:	
EXISTING:	IIB UNPROTECTED
FIRE PROTECTION:	
EXISTING:	BUILDING FULLY SPRINKLERED
PROJECT NARRATIVE:	
THIS PROJECT INVOLVES THE CLEANING AND REPAIR OF THE EXISTING PARKING GARAGE.	

DRAWING INDEX

SHEET #	DRAWING #	DRAWING TITLE	07.12.22 - DD PHASE REVIEW	09.02.22 - 85% CD'S	09.27.22 - 100% CD'S	10.21.22 - DCA REVIEW	12.12.23 - AMENDMENT APPLICATION
ARCHITECTURAL							
1	CS	COVER SHEET	●	●	●	●	●
2	A1.1	LOWER LEVEL FLOOR PLAN	●	●	●	●	●
3	A1.2	UPPER LEVEL FLOOR PLAN	●	●	●	●	●
4	A3.1	ELEVATIONS	●	●	●	●	●
5	A4.1	DETAILS	●	●	●	●	●
6	A4.2	DETAILS	●	●	●	●	●
7	A5.1	SPECIFICATIONS	●	●	●	●	●
8	A5.2	SPECIFICATIONS	●	●	●	●	●
9	A5.3	SPECIFICATIONS	●	●	●	●	●
STRUCTURAL							
10	S1.0	LOWER LEVEL PLAN, SLAB ON GRADE REPAIRS	●	●	●	●	●
11	S1.1	LOWER LEVEL RCP	●	●	●	●	●
12	S1.2	UPPER LEVEL PLAN	●	●	●	●	●
13	S1.3	SECTIONS AND REPAIR NOTES	●	●	●	●	●
14	S1.4	DETAILS AND GENERAL NOTES	●	●	●	●	●
15	S1.5	SECTIONS AND DETAILS	●	●	●	●	●
16	S1.6	SECTIONS AND REPAIR NOTES	●	●	●	●	●
PLUMBING							
17	P1.1	LOWER LEVEL PLAN - PLUMBING	●	●	●	●	●
18	P1.2	UPPER LEVEL PLAN - PLUMBING	●	●	●	●	●
19	P2.1	SCHEDULES & SPECIFICATIONS - PLUMBING	●	●	●	●	●

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609-655-2400

MARK A. BERKOWSKY  
N.J. CERTIFICATE: C-6319

DATE



## FORCINA PARKING GARAGE REPAIRS

METZGER DR.  
EWING, N.J. 08628

ISSUED FOR:

REV	DATE	DESCRIPTION
	07.12.22	DD PHASE REVIEW
	09.02.22	85% CD'S
	09.27.22	100% CD'S
	10.21.22	DCA REVIEW
	12/15/23	FOR BID

DRAWING TITLE  
COVER SHEET

PROJECT NO.	DATE
22058	07.12.22
DRAWN BY	CHECKED BY
TCY	RMF

DRAWING NUMBER

CS

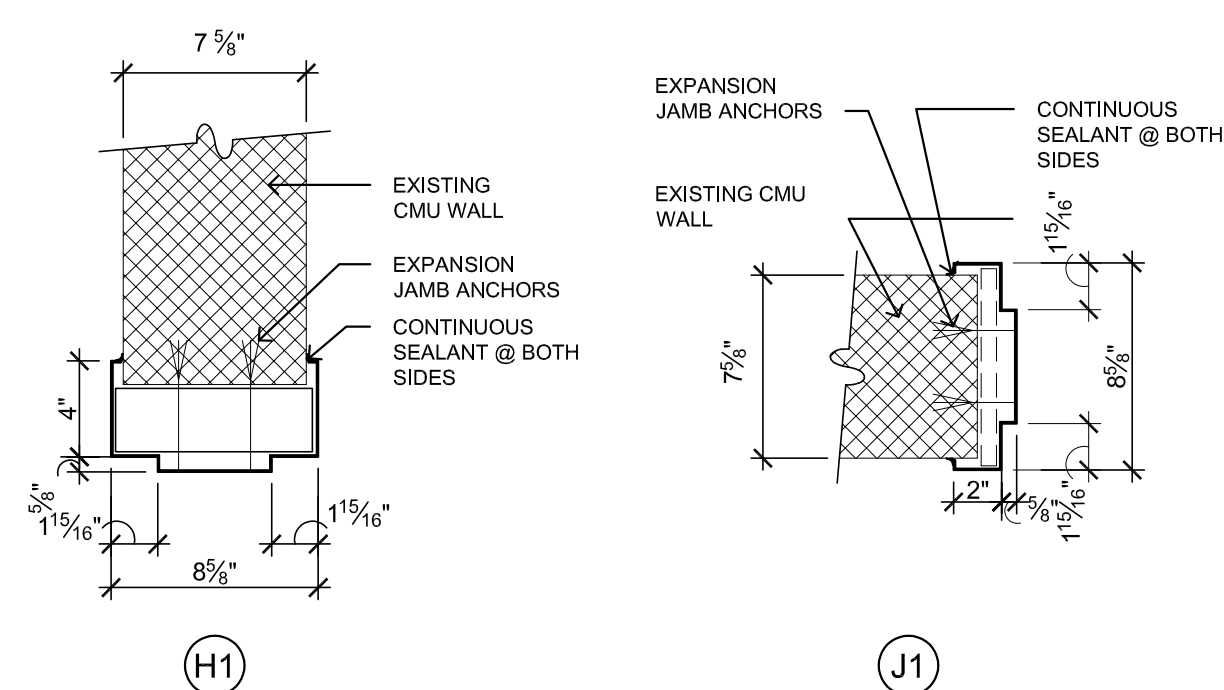
SHEET 1 OF 19



A circular compass rose with a white arrow pointing towards the top-right. The rest of the circle is filled with diagonal hatching. To the right of the circle, the words "TRUE NORTH" are written in a sans-serif font, with "TRUE" on the top line and "NORTH" on the bottom line.

- 

## 2 DOOR & FRAME TYPE



### 3 HEAD & JAMB DETAILS

[illegible]

1. INSULATED STEEL PAINTED DOOR

**HARDWARE SET NO. 1**

3- HINGES

1- NEW LATCH SET TO MATCH EXISTING,  
RE-USE EXISTING LOCK CYLINDERS

1- CLOSER WITH STOP ARM

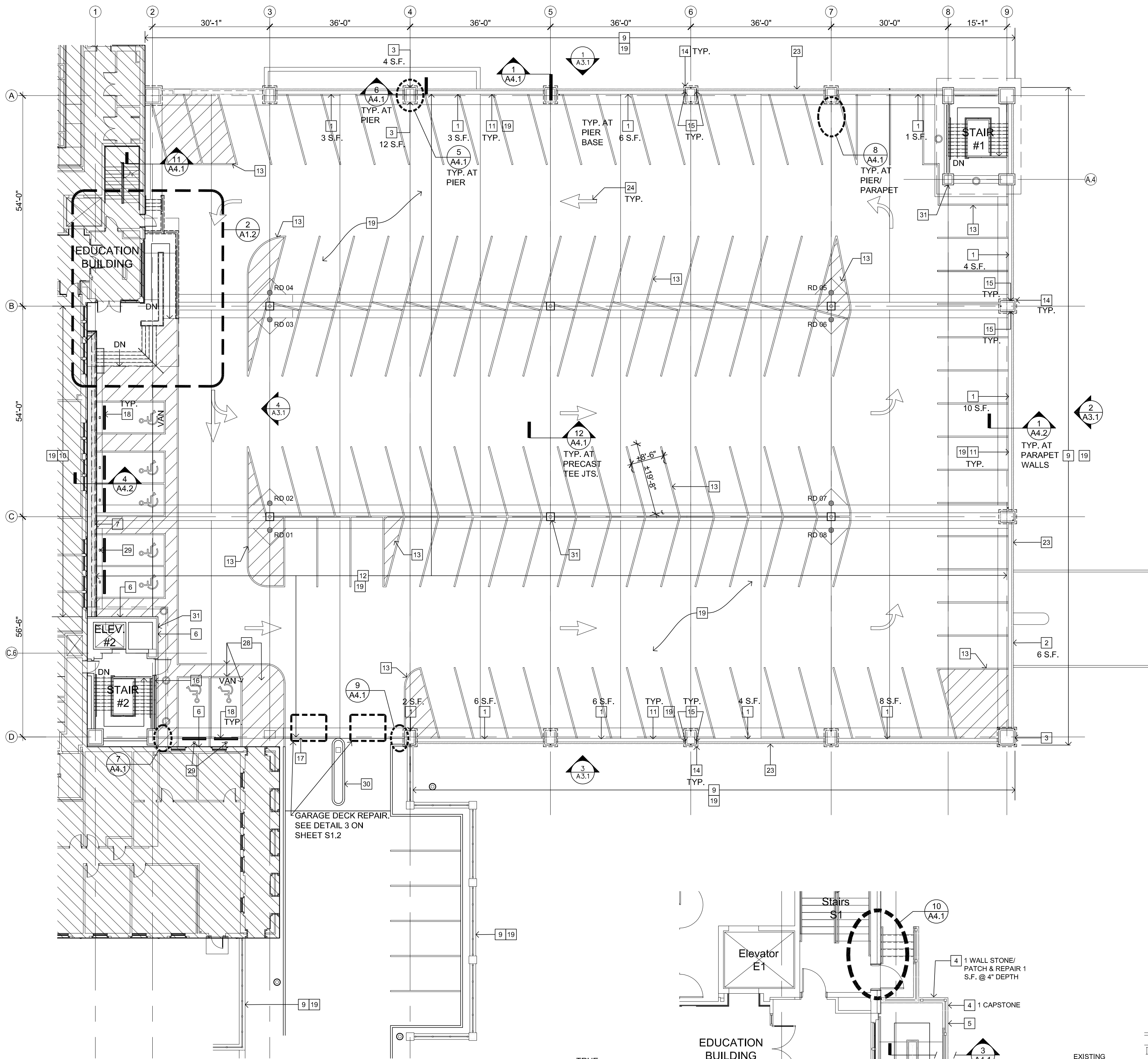
1- PERIMETER WEATHER STRIPPING

3- SILENCERS

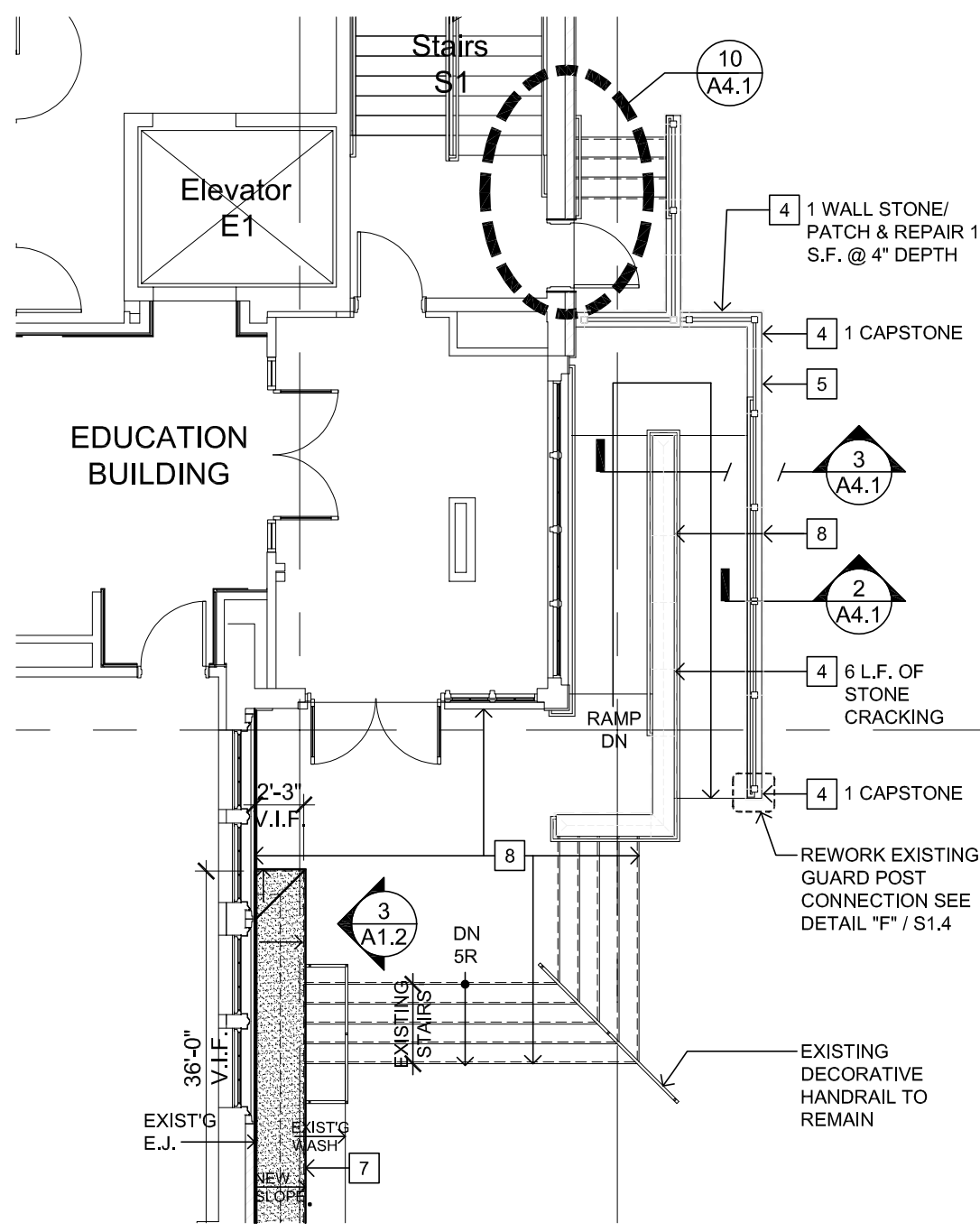
SHEET 2 OF 19



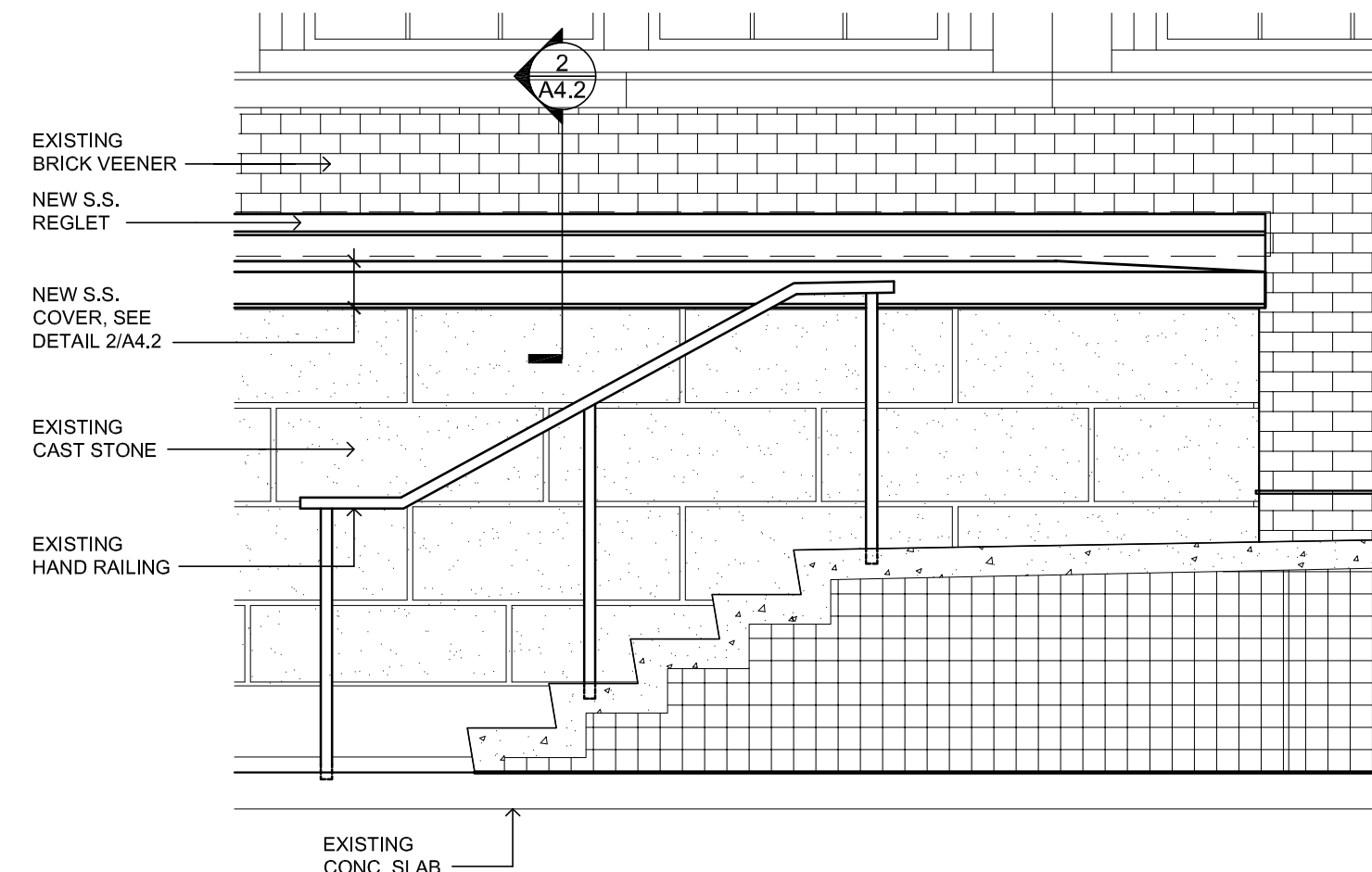
C:\Users\jason\OneDrive - Berkowsky and Associates, Inc\General - BAL\_Design\The College of New Jersey\22058 Forcina Parking Garage Repairs\04\_CD\01\_CAD-REVIT\00\_CadRevit\_Current\_Scope Reduc\01\_Arch\02\_22058\_A1.2\_UPPER LEVEL PLAN.dwg 12/13/23 - 2:48pm



**1 UPPER LEVEL FLOOR PLAN**  
SCALE: 1/16" = 1'-0"



**2 ENLARGED PLAN**  
SCALE: 1/8" = 1'-0"



**3 STAIR SECTION**  
SCALE: 1/2" = 1'-0"

**WORK NOTES:**

- AREAS OF CONCRETE AS INDICATED TO BE REPAIRED W/ NEW CEMENTITIOUS REPAIR MORTAR FLUSH W/ ADJACENT SURFACE. EXTEND WATERPROOF DECK COATING/WRAP UP BACKSIDE OF THE PRECAST PANEL WALLS @ THE TOP DECK & UP, OVER & DOWN COPINGS.
- ISOLATED AREAS OF CRACKED/ DAMAGED BRICK WILL BE REMOVED AND NEW BRICK TO MATCH EXISTING SHALL BE TOOTHED-INTO THE EXISTING WALL. AREAS OF CRACKED/ DETERIORATED MORTAR WILL BE GROUND-OUT 3/4" DEEP MIN. BACK TO SOUND MATERIAL AND REPOINTED W/ NEW MORTAR TO MATCH EXISTING COLOR, TEXTURE AND APPEARANCE.
- REMOVE & RESET ALL LOOSE BRICK.
- REMOVE BROKEN CURB CAPSTONE AND REPLACE WITH NEW TO MATCH EXISTING.
- INSTALL THROUGH-WALL METAL FLASHING AND INSTALL NEW METAL COPING ABOVE EXISTING CAST STONE COPING.
- THE NEW WATERPROOF DECK COATING SHALL EXTEND UP VERTICALLY ONTO BRICK CLADDING UP TO THE LINE OF THE THROUGH-WALL FLASHING. WHERE THROUGH-WALL FLASHING IS NOT VISIBLY EVIDENT REMOVE (3) COURSES OF BRICK ABOVE THE DECK AND INSTALL NEW CONTINUOUS METAL PAN FLASHING INTEGRATED W/ THE EXISTING WRB.
- REMOVE ALL SOIL IN THE PLANTER. CAST STONE CLADDING AND CAST STONE TO REMAIN. INSTALL NEW S.S. REGLET AND METAL COPING. THIS WORK SHALL BE DONE FOR ENTIRE LENGTH OF PLANTER. SEE DETAIL 4/ A4.2 FOR ADDITIONAL INFORMATION.
- EXTEND THE WATERPROOF DECK COATING CONTINUOUSLY ACROSS THE STAIRS & RAMP SURFACE. IN ADDITION, DECLAD THE CAST STONE WALLS TO ALLOW FOR NEW THROUGH-WALL FLASHINGS AND WRB TO ENSURE THE SUCCESS AND CONTINUITY OF THE NEW WATERPROOFING ACROSS THE TOP DECK OF THE GARAGE. ALL DAMAGED CAST STONE SHALL BE REPLACED WITH NEW TO MATCH EXISTING. SEE DETAIL 2/A4.1 FOR ADDITIONAL INFORMATION.
- ALL BRICK AND CAST STONE WALLS SHALL BE POWER WASHED TO REMOVE DIRT AND STAINING.
- POWER WASH BRICK MASONRY AND CAST STONE WINDOW SILLS ABOVE EXISTING PLANTER FOR LENGTH OF PLANTER TO REMOVE ALL DIRT AND STAINING. EXTENT OF WORK INCLUDES ALL BRICK COURSING UP TO AND INCLUDING THE CAST STONE WINDOW SILLS.
- POWER WASH INTERIOR FACE OF CONCRETE WALL SURFACES TO REMOVE ALL DIRT AND STAINING.
- POWER WASH SURFACE OF DECK TO REMOVE ALL DIRT, OILS AND STAINING. AFTER WASHING, ENTIRE UPPER LEVEL DECK SURFACE SHALL RECEIVE WATERPROOF COATING. COATING SHALL ALSO COVER INTERIOR FACE OF DECK PERIMETER WALL UP AND OVER CAST STONE CAP. SEE TRAFFIC COATING SPECIFICATIONS ON DWG A5.1.
- INSTALL NEW PARKING SPACE STRIPING AND STRIPING AT NO- PARKING AREAS AS SHOWN W/ DIAGONAL STRIPING. COORDINATE AS REQUIRED WITH DECK COATING. SEE TRAFFIC COATING SPECIFICATIONS ON DWG A5.1. FINAL STRIPING PLAN TO MATCH EXISTING STRIPING PLAN UNLESS OTHERWISE NOTED. USE YELLOW PAINT TO MATCH EXISTING.
- AT ALL COLUMNS/ PIERS REMOVE CAST STONE COPING CAPS AND (4) COURSES MIN. OF BRICK BELOW. INSTALL NEW METAL THROUGH-WALL FLASHING AND WEEPS AT ALL 4-SIDES AND CONTINUOUS ACROSS THE TOP OF THE COLUMN/ PIER. REMOVE (3) COURSES OF BRICK MIN. AT THE BASE OF THE COLUMN/ PIER AND INSTALL NEW METAL CONTINUOUS THROUGH-WALL FLASHING AND WEEPS. ONCE COMPLETE INSTALL NEW BRICK & MORTAR TO MATCH THE EXISTING AND REINSTALL THE CAST STONE CAPS. WATERPROOF COATING SHALL EXTEND UP THE BACK-SIDE OF THE CONC. COLUMN/ PIER AND NEW WATERPROOF COVERS INSTALLED OVER THE STEEL CONNECTIONS.
- REMOVE AND REPLACE ALL SEALANTS AT JOINT BETWEEN PRE-CAST WALL PANEL AND COLUMNS/ PIERS.
- STOREFRONT JAMB SHALL BE ANCHORED TO THE SLAB AND THE METAL FILLER EFFECTIVELY SEALED TO PREVENT PREMATURE FAILURE OF THE ABUTTING DECK WATERPROOFING. INSTALL A RABBETED THRESHOLD TO PROVIDE A GASKET AS WELL AS TO TERMINATE THE WATERPROOF COATING BENEATH.
- REMOVE EXISTING EXPANSION JOINT MATERIAL & BACKER ROD, CLEAN OUT JOINT, INSTALL NEW BACKER ROD AND JOINT SEALANT. SEE SPECIFICATIONS.
- REMOVE EXISTING PRE-CAST CONC. PARKING BUMPER, REPAIR DECK SURFACE AS REQUIRED. INSTALL NEW PARKING BUMPER WITH EPOXY ADHESIVE. SEE SPECIFICATIONS.
- ALL EXISTING WALL, FLOOR & CEILING MOUNTED FIXTURES, EQUIPMENT & CONDUIT SHALL BE PROTECTED DURING POWER WASHING ACTIVITIES. CONTRACTOR SHALL ATTEND PRE-CONSTRUCTION WALK-THRU TO IDENTIFY EQUIPMENT TO BE PROTECTED. SEE GENERAL NOTES - EXISTING CONDITIONS PROTECTION ON COVER SHEET.
- NOT USED
- NOT USED
- NOT USED
- EXISTING LIGHTNING PROTECTION SYSTEM SHALL BE INSPECTED BY A CERTIFIED PROFESSIONAL AND REPAIRED TO MEET ALL APPLICABLE REQUIREMENTS. SEE LIGHTNING PROTECTION SPECIFICATIONS ON DWG A5.3.
- AFTER POWER WASHING, APPLY NEW PAINT TO EXISTING TRAFFIC DIRECTIONAL ARROWS ON DECK SURFACE, COORDINATE AS REQUIRED W/ DECK COATING. USE YELLOW PAINT TO MATCH EXISTING.
- NOT USED
- NOT USED
- NOT USED
- BARRIER FREE PARKING SPACE STRIPING, NON- PARKING AREAS DIAGONAL STRIPING, BARRIER FREE SYMBOL AND VAN LETTERING SHALL BE REPAINTED. USE BLUE PAINT TO MATCH EXISTING AND FOLLOW EXISTING LAYOUT. TYPICAL FOR ALL BARRIER FREE PARKING LOCATIONS. G.C. SHALL SUBMIT NEW STRIPING LAYOUT SHOP DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
- EXISTING BARRIER FREE PARKING SPACE SIGNAGE TO REMAIN. POLE W/ SIGNS SHALL BE REMOVED FROM POLE ANCHOR EMBEDDED IN DECK, CLEAN OFF RUST AND SAND SMOOTH ANCHORS, THEN PAINT W/ RUST PREVENTER, RE-INSTALL POLE AND SIGNS ON ANCHOR. TYPICAL FOR ALL SIGNS (TOTAL 7).
- ALL PAINTED CURBING SHALL BE SCRAPPED, CLEANED AND RE-PAINTED TO MATCH EXISTING. USE YELLOW PAINT.
- EXISTING WALL MOUNTED G SIGN TO BE REPLACED. REPLACE MOUNTING HARDWARE W/ STAINLESS STEEL TO MATCH EXISTING, INSTALL NEW SIGN THAT MATCHES EXISTING SIGN W/ WHITE BACKGROUND AND BLACK TEXT. VERIFY TEXT FONT W/ ARCHITECT.

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MARK A. BERKOWSKY  
N.J. CERTIFICATE # C-4319

DATE



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GARAGE REPAIRS**

**METZGER DR.  
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	12/15/23	FOR BID

DRAWING TITLE  
UPPER LEVEL FLOOR PLAN

PROJECT NO. 22058	DATE 07.12.22
DRAWN BY TCY	CHECKED BY RMF

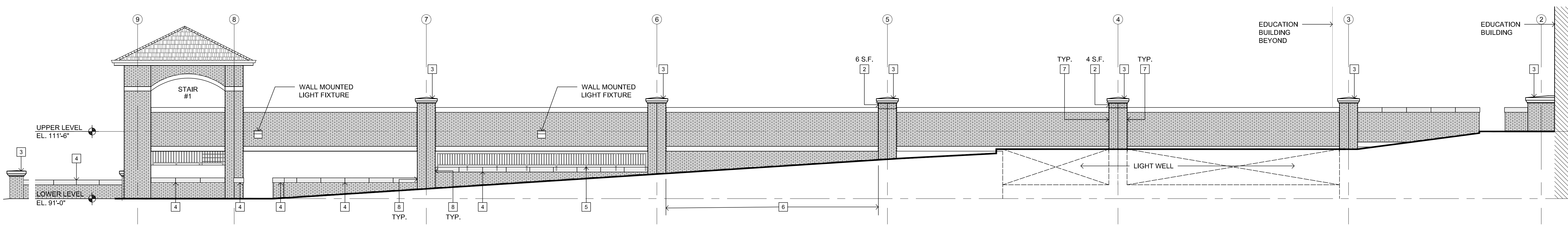
DRAWING NUMBER

**A1.2**

SHEET 3 OF 19

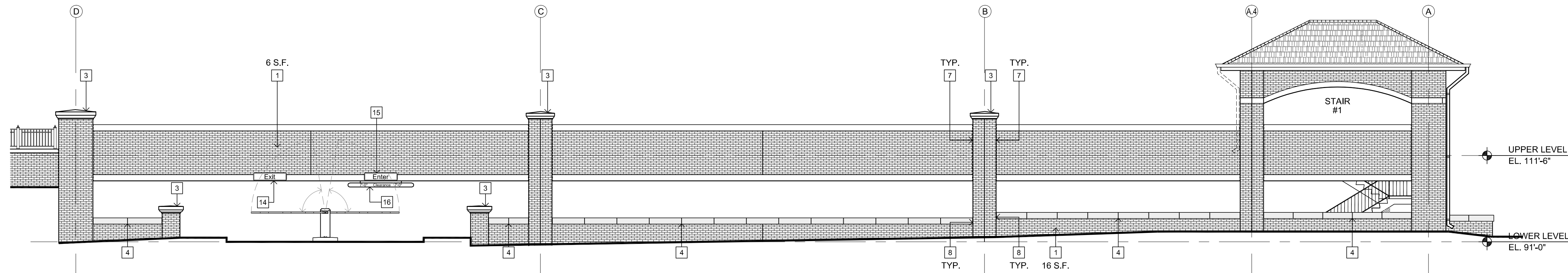


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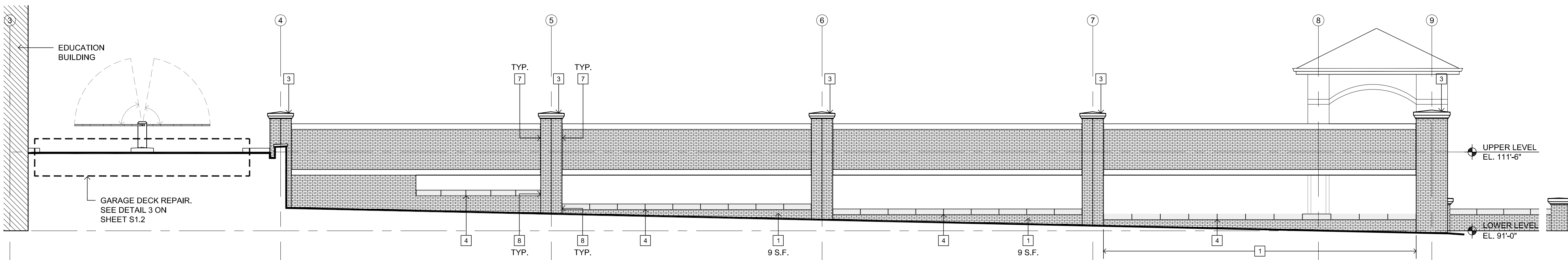
## 1 NORTH ELEVATION

SCALE: 1/8" = 1'-0"



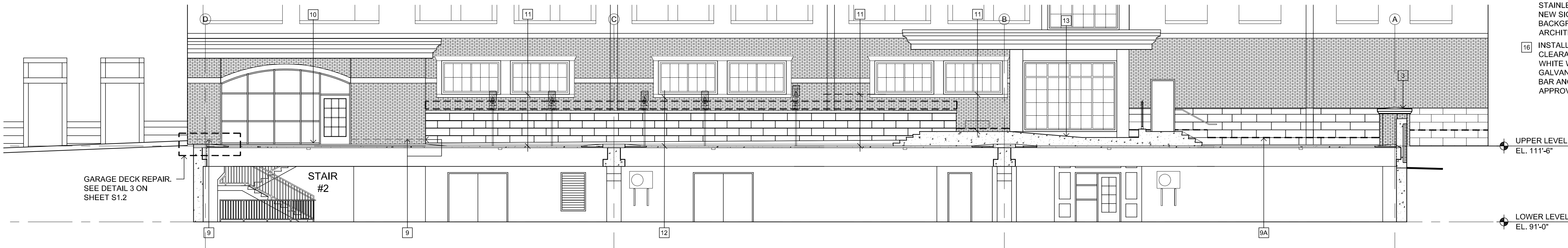
## 2 EAST ELEVATION

SCALE: 1/8" = 1'-0"



## 3 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"



## 4 EAST ELEVATION

SCALE: 1/8" = 1'-0"

### WORK NOTES:

- ISOLATED AREAS OF CRACKED/ DAMAGED BRICK WILL BE REMOVED AND NEW BRICK TO MATCH EXISTING SHALL BE TOOTHED-INTO THE EXISTING WALL. AREAS OF CRACKED/ DETERIORATED MORTAR WILL BE GROUND-OUT 3/4" DEEP MIN. BACK TO SOUND MATERIAL AND REPOINTED W/ NEW MORTAR TO MATCH EXISTING COLOR, TEXTURE AND APPEARANCE.
- REMOVE & RESET ALL LOOSE BRICK.
- AT ALL COLUMNS/ PIERS REMOVE CAST STONE COPING CAPS AND 4 COURSES MIN. OF BRICK BELOW. INSTALL NEW METAL THROUGH-WALL FLASHING AND WEEPS AT ALL 4-SIDES AND CONTINUOUS ACROSS THE TOP OF THE COLUMN/ PIER.
- SEAL ALL JOINTS IN PRECAST CONCRETE COPING.
- NEW SEALANT AROUND 8 RAILING POSTS.
- REMOVE & REPLACE BUILDING BRICK 36" LONG & 4 COURSES HIGH.
- REMOVE AND REPLACE ALL SEALANTS AT JOINT BETWEEN PRE-CAST WALL PANEL AND COLUMNS/ PIERS.
- REMOVE AND REPLACE CAST STONE COPINGS WITH NEW BACKER ROD AND SILICONE SEALANT AT COLUMNS/ PIERS.
- THE NEW WATERPROOF DECK COATING SHALL EXTEND UP VERTICALLY ONTO BRICK CLADDING UP TO THE LINE OF THE THROUGH-WALL FLASHING. WHERE THROUGH-WALL FLASHING IS NOT VISIBLY EVIDENT WE RECOMMEND REMOVAL OF (3) COURSES OF BRICK ABOVE THE DECK AND INSTALLATION OF A NEW CONTINUOUS METAL PAN FLASHING INTEGRATED W/ THE EXISTING WRB.
- THE NEW WATERPROOF DECK COATING SHALL EXTEND UP VERTICAL FACE OF WALL TO UNDERSIDE OF EXISTING METAL THROUGH-WALL FLASHING AT CAST STONE CLADDING. SEE DETAIL 11/A4.1
- STOREFRONT JAMB SHALL BE ANCHORED TO THE SLAB AND THE METAL FILLER EFFECTIVELY SEALED TO PREVENT PREMATURE FAILURE OF THE ABUTTING DECK WATERPROOFING. INSTALL A RABBETED THRESHOLD TO PROVIDE A GASKET AS WELL AS TO TERMINATE THE WATERPROOF COATING BENEATH.
- POWER WASH PLANTER CAST STONE CLADDING, BRICK MASONRY AND CAST STONE WINDOW SILLS ABOVE EXISTING PLANTER FOR LENGTH OF PLANTER TO REMOVE ALL DIRT AND STAINING. EXTENT OF WORK INCLUDES ALL BRICK COURSING UP TO CAST STONE TRIMS & WINDOW SILLS.
- REMOVE ALL SOIL IN THE PLANTER. CAST STONE WALL AND CAST STONE CAP TO REMAIN. INSTALL NEW S.S. REGLET AND NEW METAL COPING. THIS WORK SHALL BE DONE FOR ENTIRE LENGTH OF PLANTER. SEE DETAIL 4/ A4.2 FOR ADDITIONAL INFORMATION.
- BASED UPON THE STAIRS AND RAMP BEING CONSTRUCTED OVERTOP THE GARAGE EXTEND THE WATERPROOF DECK COATING CONTINUOUSLY ACROSS THE STAIRS & RAMP SURFACE. IN ADDITION, DECLAD THE CAST STONE WALLS TO ALLOW FOR NEW THROUGH-WALL FLASHINGS AND WRB TO ENSURE THE SUCCESS AND CONTINUITY OF THE NEW WATERPROOFING ACROSS THE TOP DECK OF THE GARAGE. ALL DAMAGED CAST STONE SHALL BE REPLACED WITH NEW TO MATCH EXISTING.
- INSTALL NEW PAINTED METAL EXIT SIGN @ VEHICLE ENTRANCE. SIGN SHALL BE MOUNTED USING EXISTING SIGN ANCHORS BUT REPLACE SCREWS/ BOLTS W/ NEW STAINLESS STEEL HARDWARE AT SIMILAR SIZE AND SHAPE. NEW SIGN SHALL MATCH EXISTING SIGN W/ WHITE BACKGROUND AND BLACK TEXT. VERIFY TEXT FONT W/ ARCHITECT.
- INSTALL NEW PAINTED METAL ENTRANCE SIGN @ VEHICLE ENTRANCE. SIGN SHALL BE MOUNTED USING EXISTING SIGN ANCHORS BUT REPLACE SCREWS/ BOLTS W/ NEW STAINLESS STEEL HARDWARE AT SIMILAR SIZE AND SHAPE. NEW SIGN SHALL MATCH EXISTING SIGN W/ WHITE BACKGROUND AND BLACK TEXT. VERIFY TEXT FONT W/ ARCHITECT.
- INSTALL NEW PENDANT MOUNTED HEIGHT GUARD CLEARANCE BAR. BAR SHALL BE 7" DIA. X 80" LONG, HDPE, WHITE W/ BLACK LETTERING AND RED STRIPING. GALVANIZED CHAIN BAR SHALL BE HUNG FROM EXISTING BAR ANCHORS AS MANUFACTURED BY POST GUARD OR APPROVED EQUAL.

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DATE



### FORCINA PARKING GARAGE REPAIRS

METZGER DR.  
EWING, N.J. 08628

#### ISSUED FOR:

REV	DATE	DESCRIPTION
07.12.22		DD PHASE REVIEW
09.02.22		85% CD'S
09.27.22		100% CD'S
10.21.22		DCA REVIEW
12/15/23		FOR BID

DRAWING TITLE  
ELEVATIONS

PROJECT NO. 22058 DATE 07.12.22

DRAWN BY TCY CHECKED BY RMF

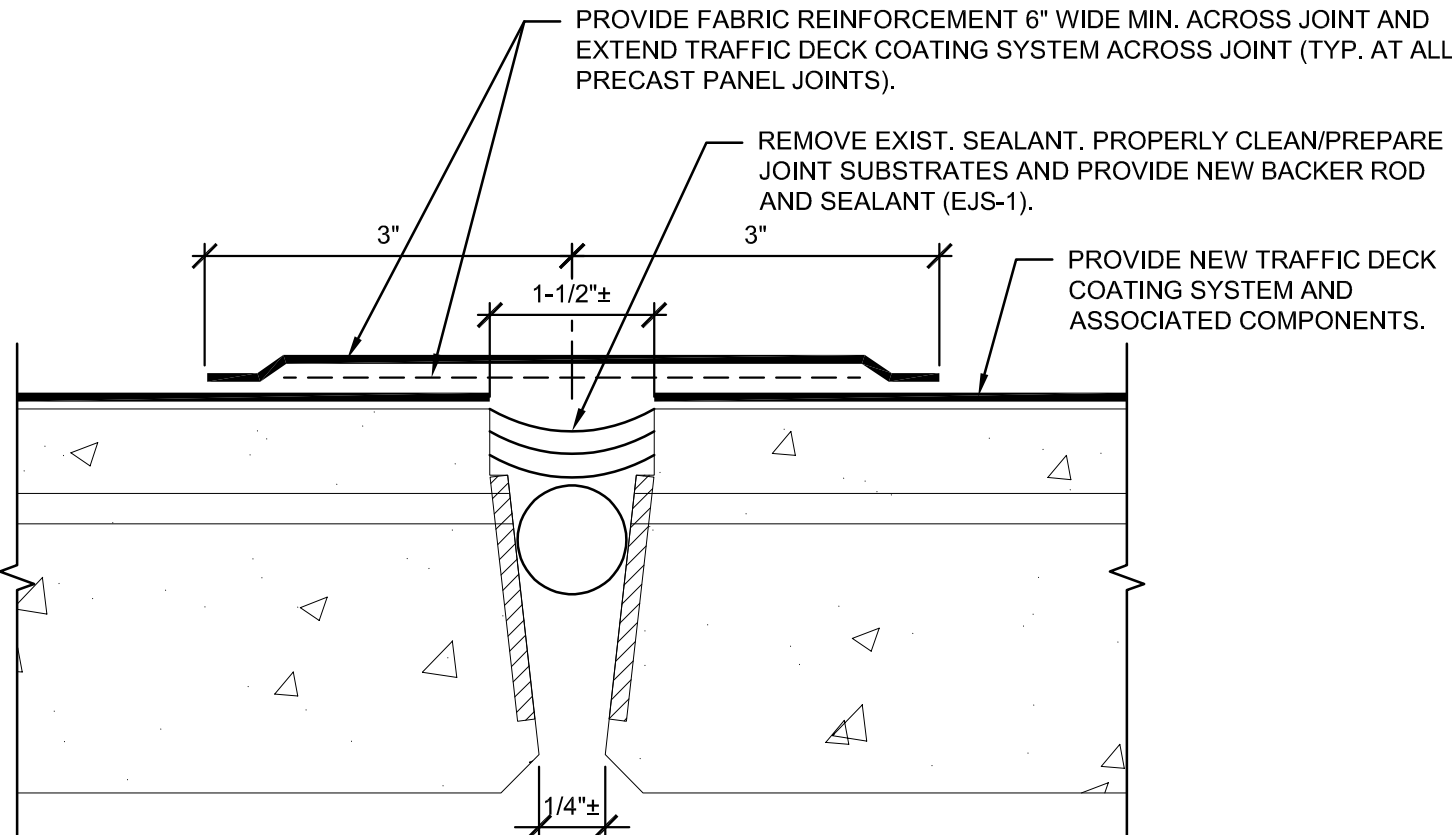
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# A3.1

SHEET 4 OF 19

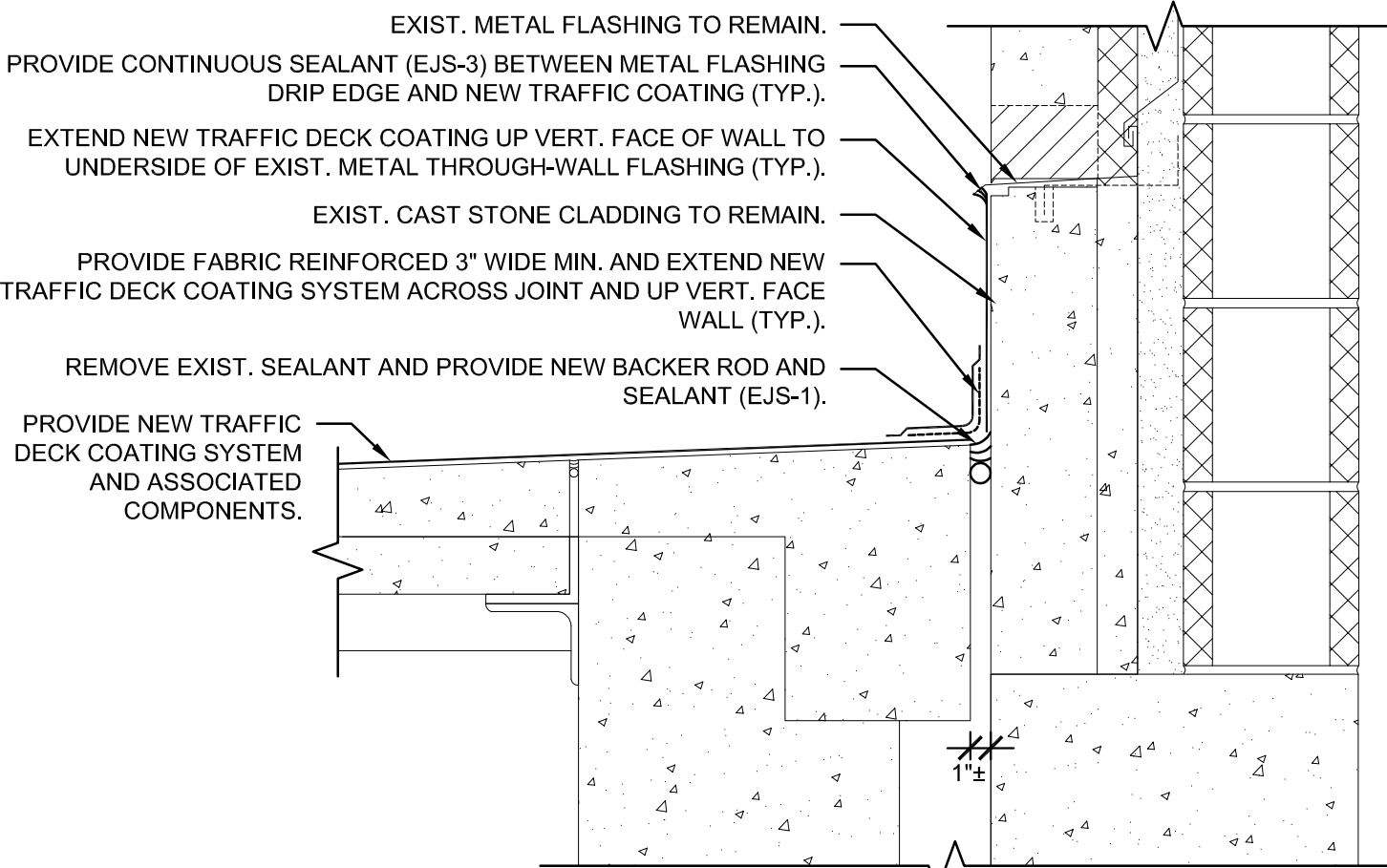
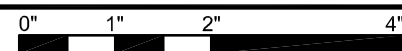


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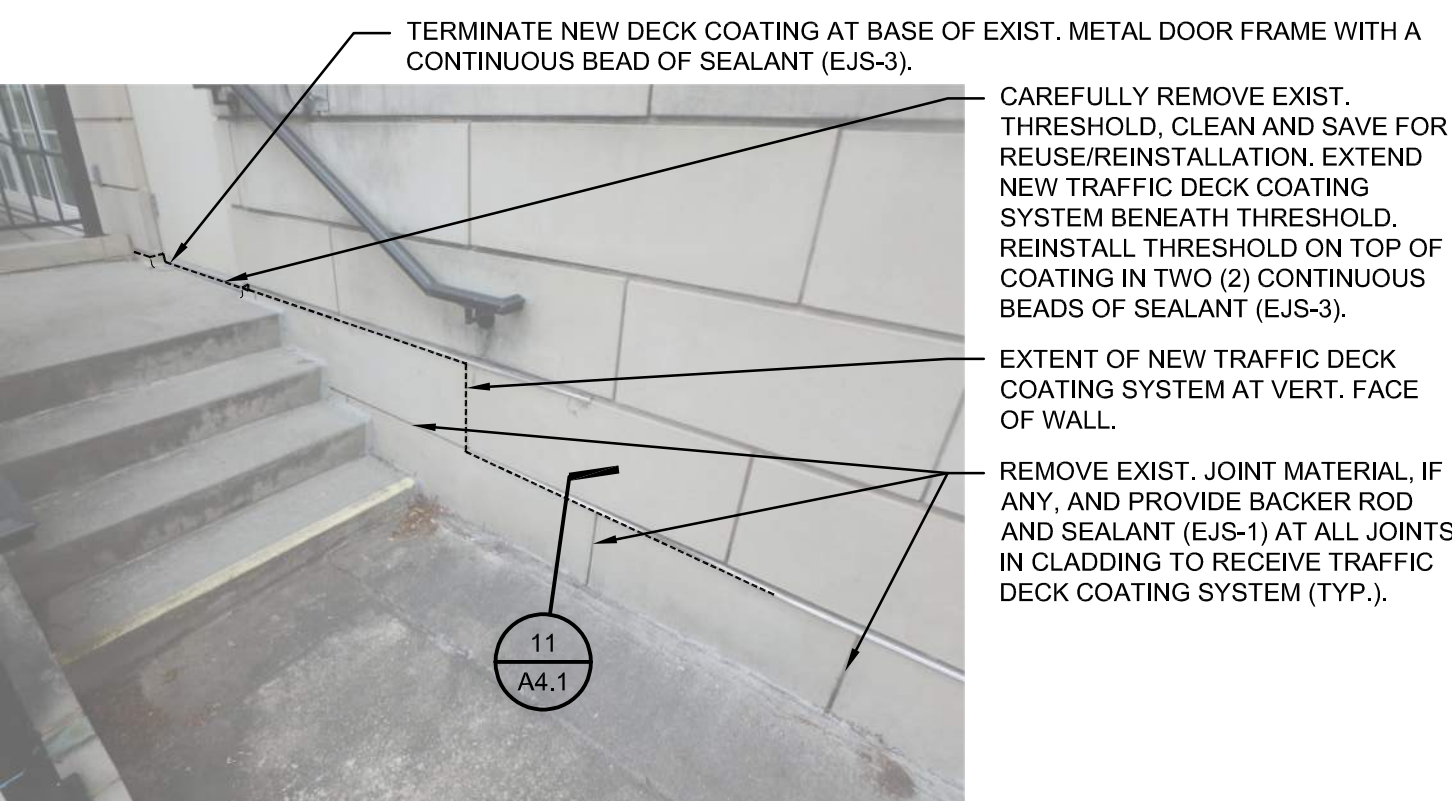
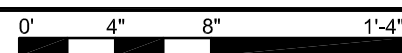
12 TYP. PRECAST TEE JOINT

A4.1 6"±=1'-0"



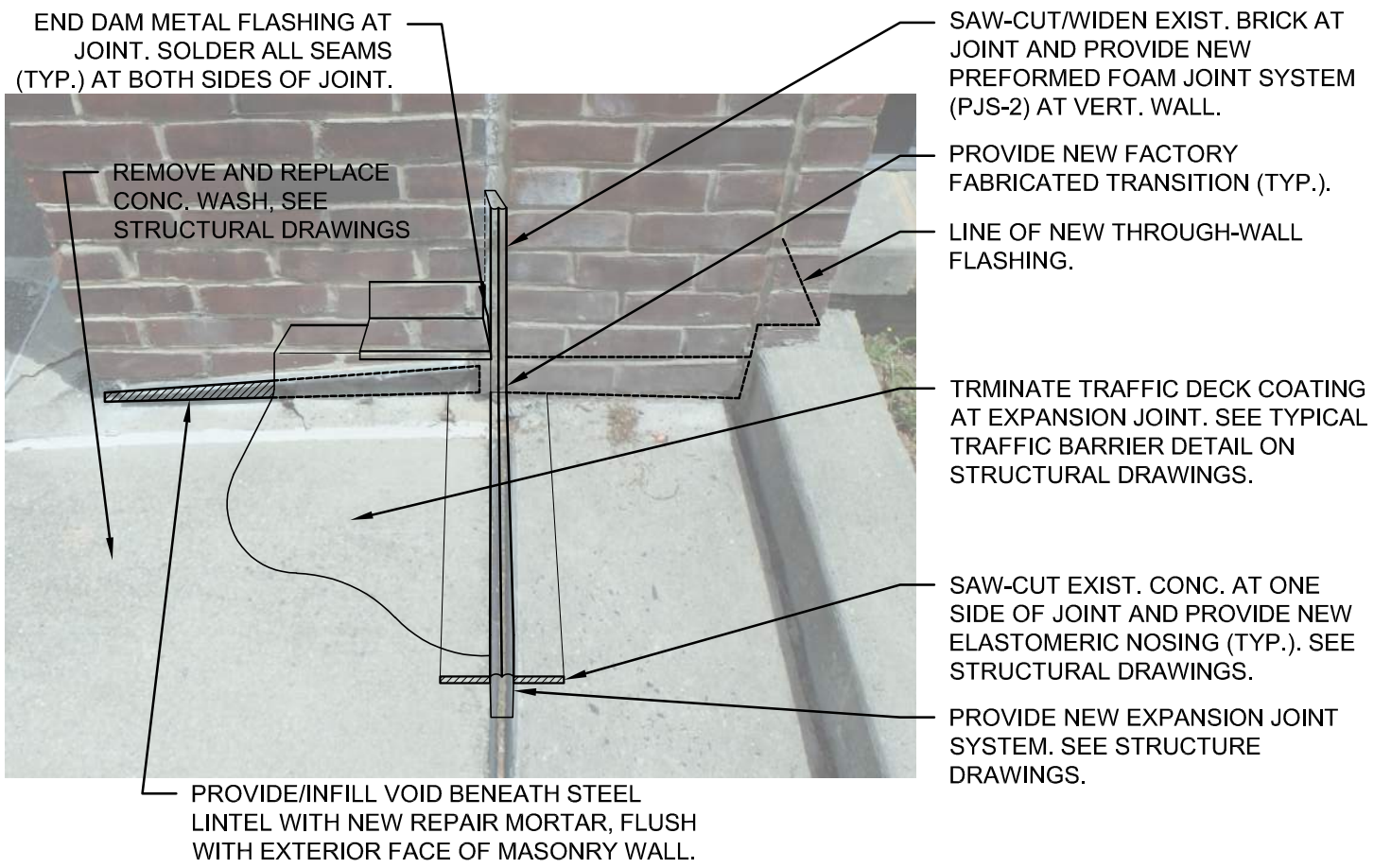
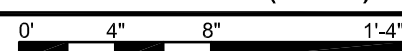
11 WALL COATING TERMINATION AT EDUCATION BUILDING WALL (TYP.)

A4.1 1-1/2"±=1'-0"



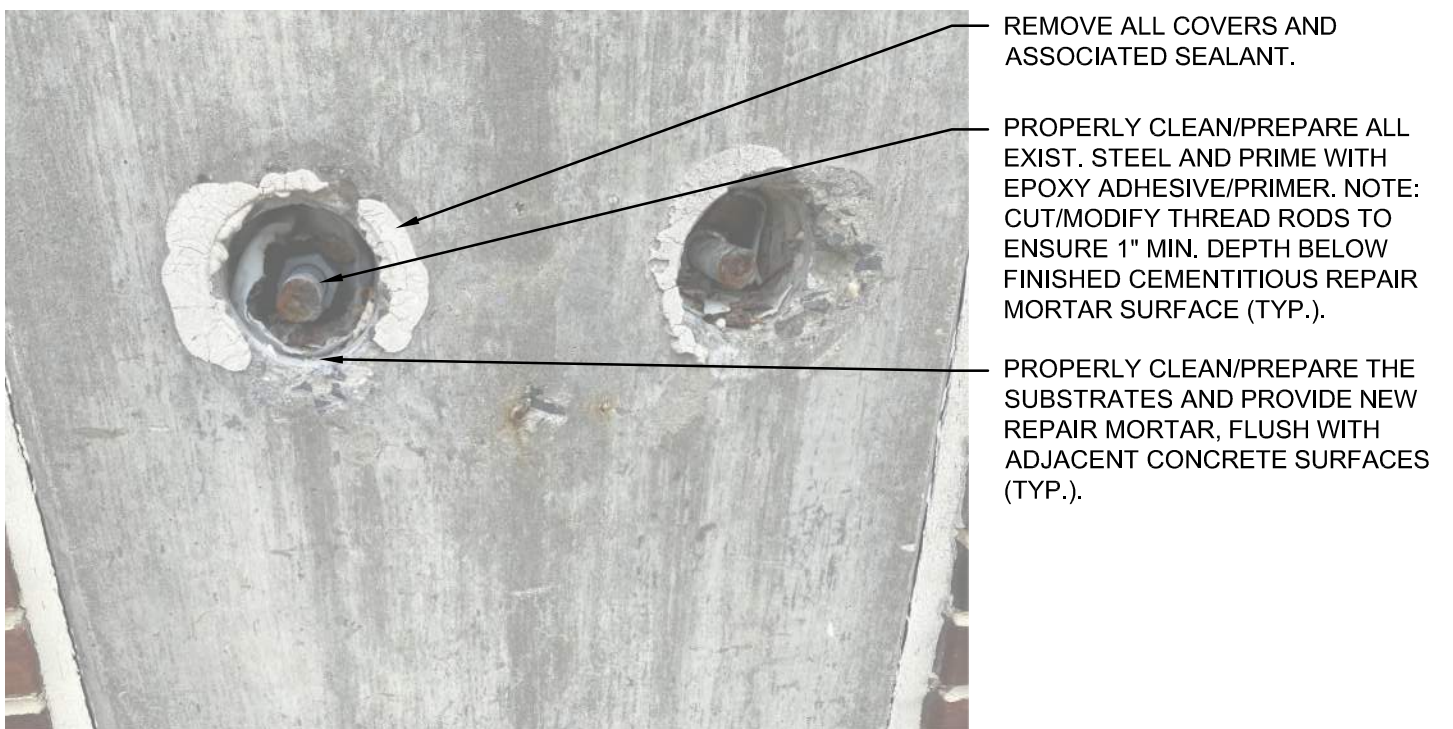
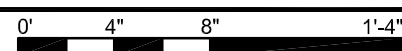
10 WALL COATING TERMINATION AT EDUCATION BUILDING WALL (TYP.)

A4.1 1-1/2"±=1'-0"



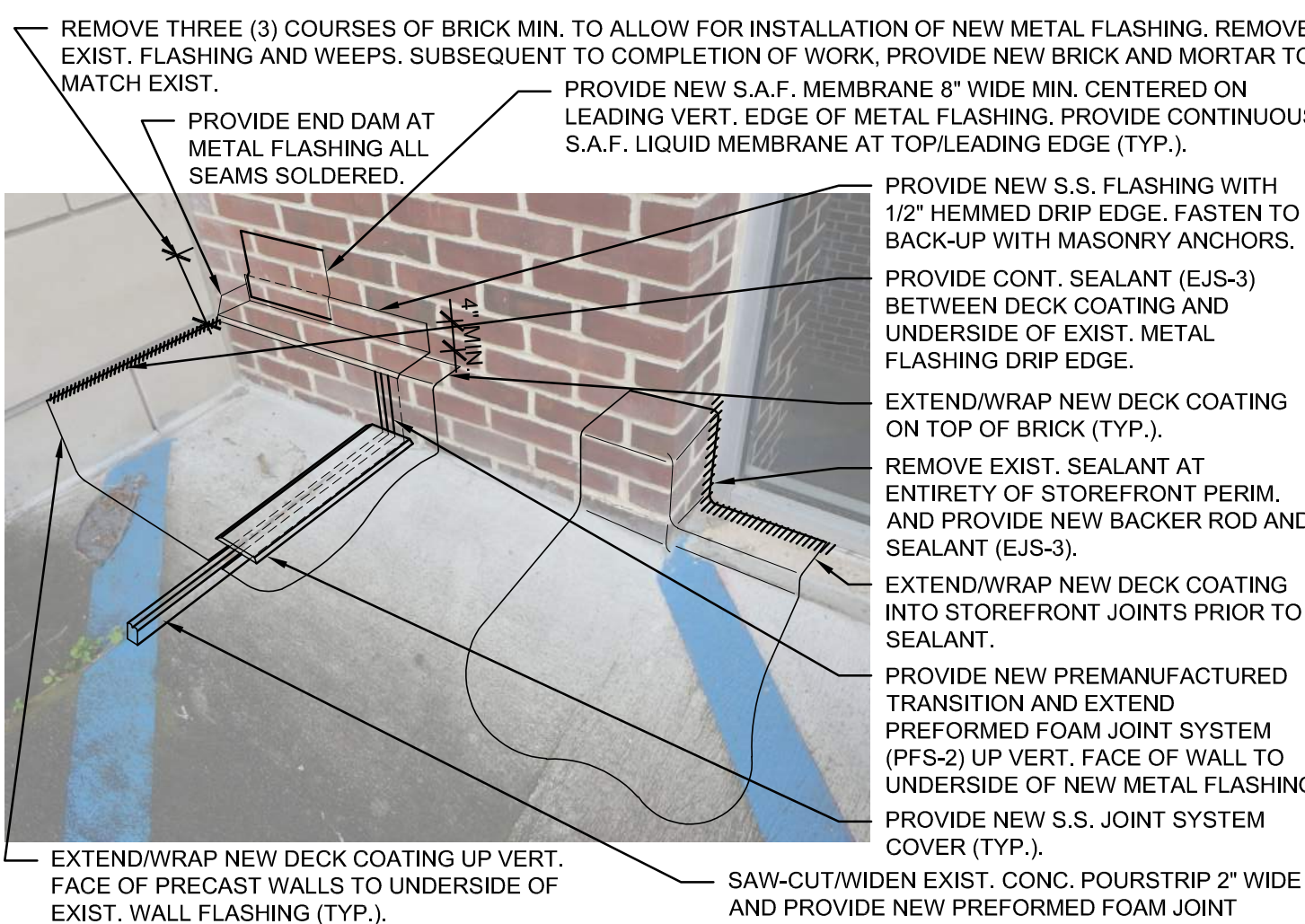
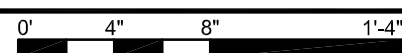
9 DETAIL AT DECK EXPANSION JOINT BRICK PIER

A4.1 1-1/2"±=1'-0"



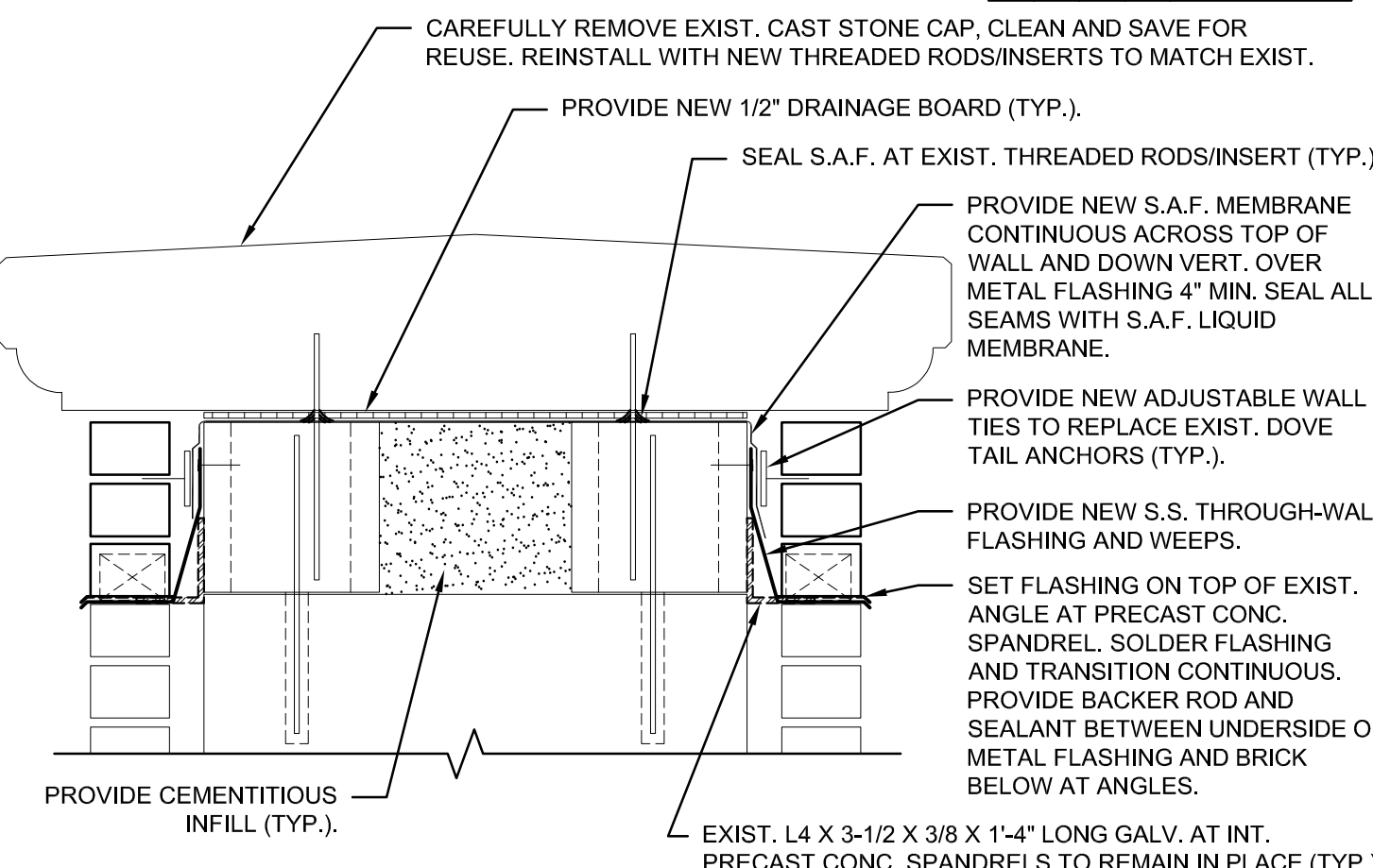
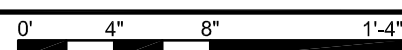
8 TYP. CONDITION AT CONC. PIERS AND WALLS AT UPPER LEVEL

A4.1 1-1/2"±=1'-0"



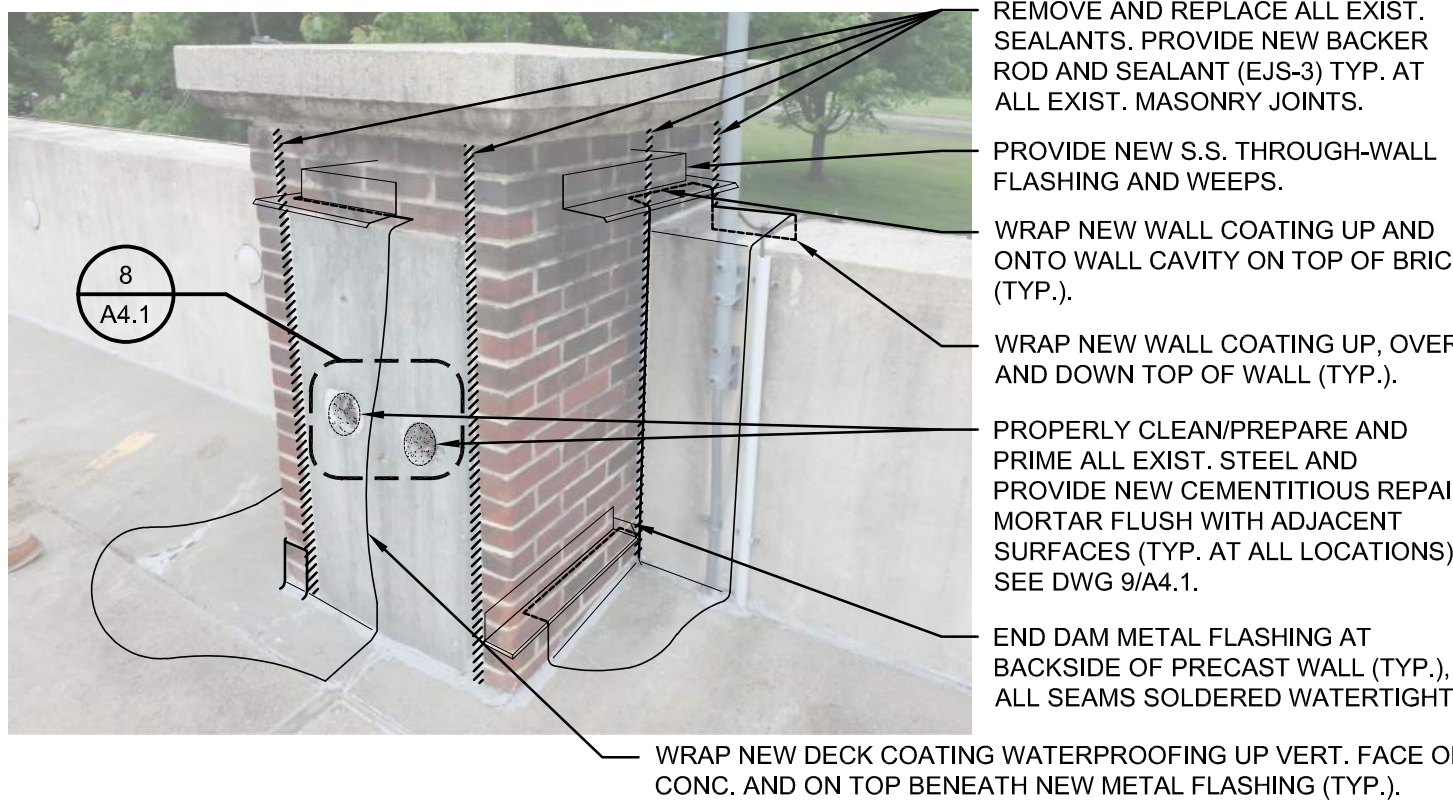
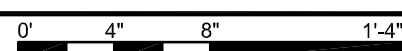
7 DETAIL AT EXPANSION JOINT TO BRICK RISING WALL & STOREFRONT

A4.1 1-1/2"±=1'-0"



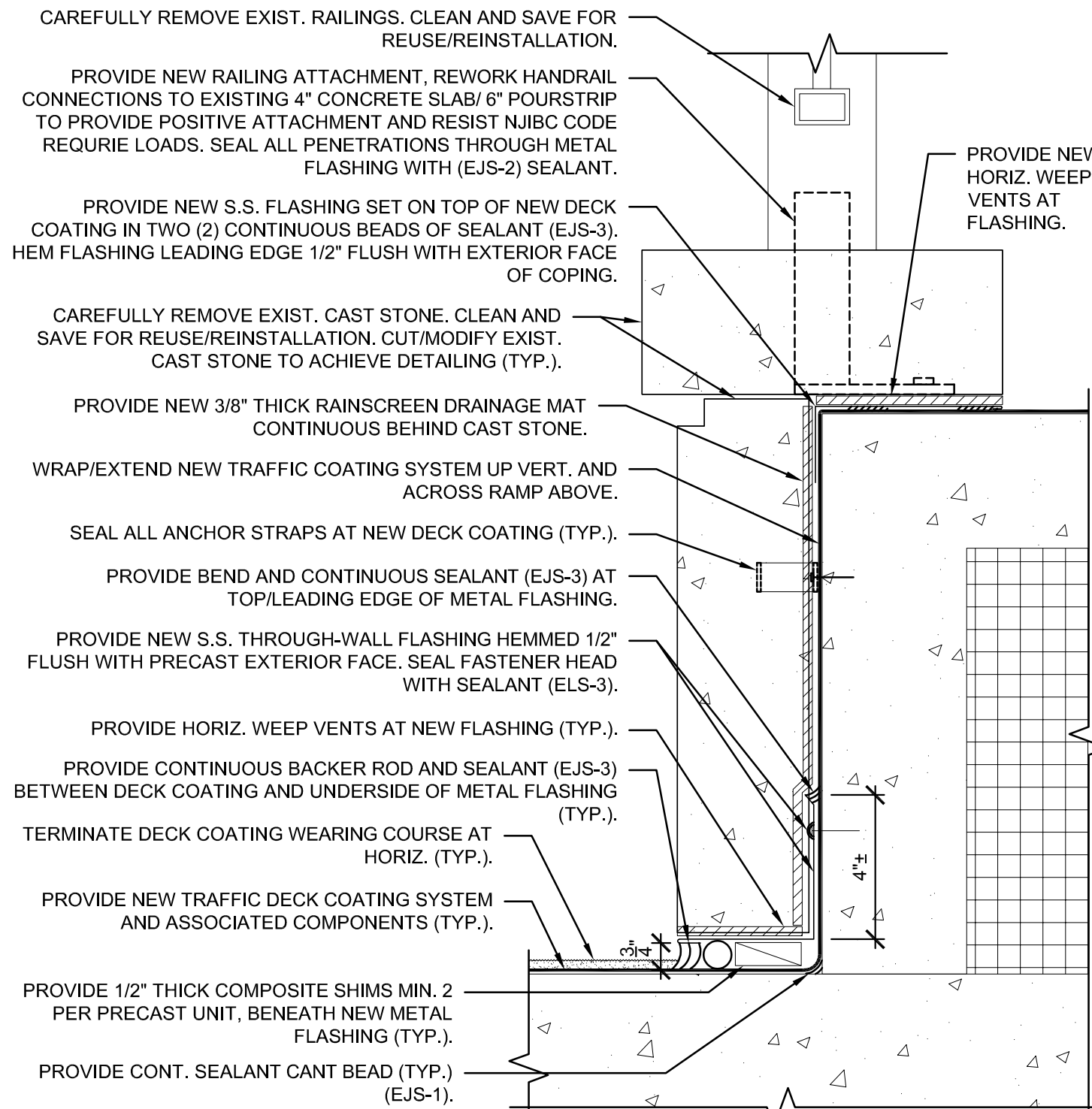
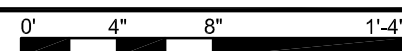
6 DETAIL AT PERIMETER PIER CAP

A4.1 1-1/2"±=1'-0"



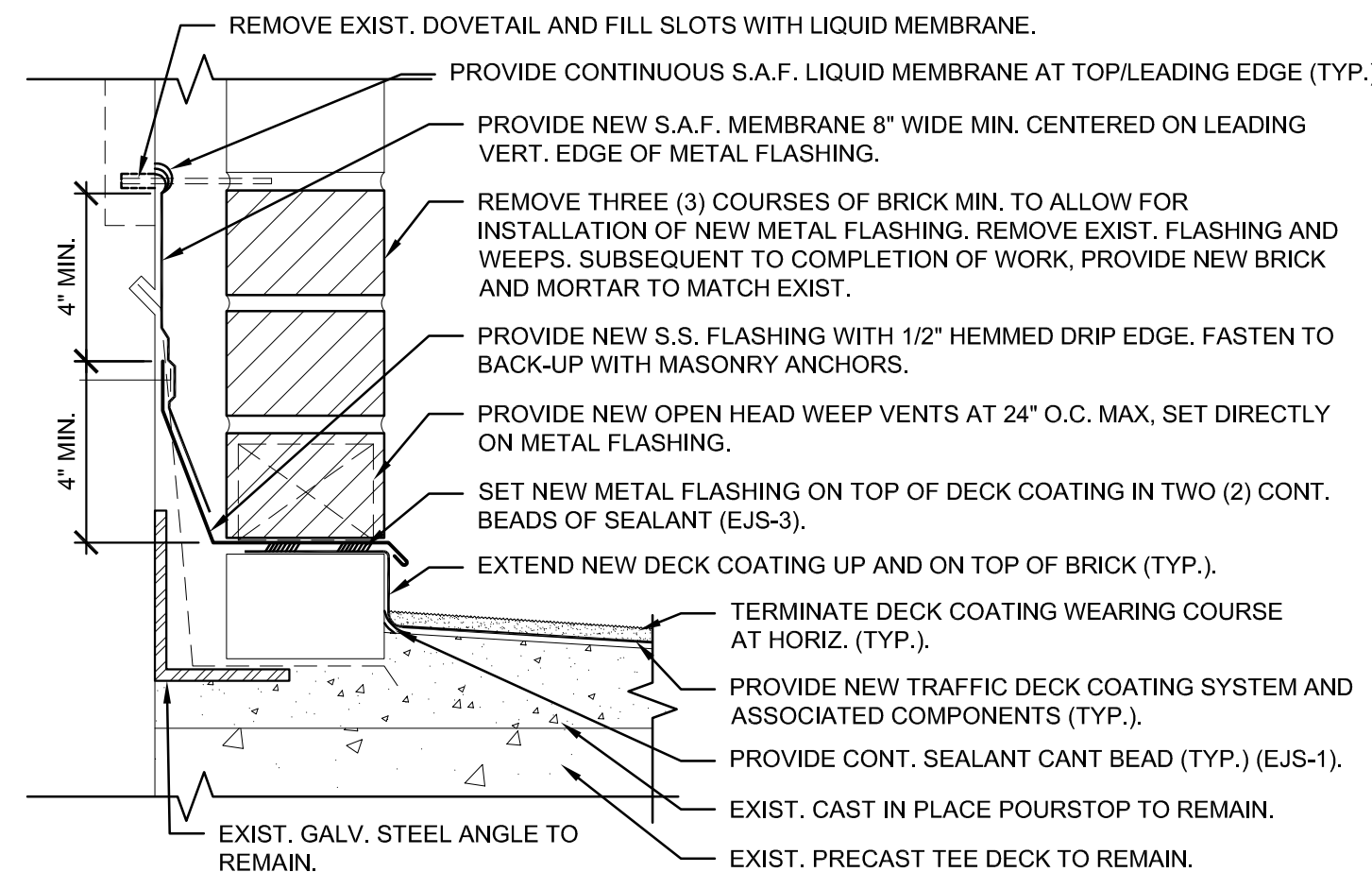
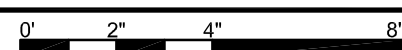
5 DETAIL AT PERIMETER PIER

A4.1 1-1/2"±=1'-0"



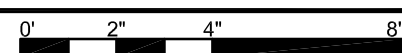
2 DETAIL AT EDUCATION BUILDING RAMP

A4.1 3"±=1'-0"



1 DETAIL AT BRICK RISING WALL

A4.1 3"±=1'-0"



## NOTES

1. REFER TO WORK NOTES ON DWGS A1.2, A1.3 & A3.1 FOR COORDINATION OF EXTENT OF BRICK & CAST STONE REMOVAL TO ACHIEVE FLASHING & WATERPROOFING DETAILS AS SHOWN.
2. CONTRACTOR SHALL FOLLOW AT MINIMUM, OSHA SILICA DUST CONTROL STANDARDS, SUCH AS WET CUTTING, VACUUM DUST COLLECTION SYSTEM AND RESPIRATORY PROTECTION DURING DEMOLITION AND CONSTRUCTION ACTIVITIES.

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PROJECT NO.

22058

DATE

07.12.22

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RMF

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OF

19

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**FORCINA PARKING  
GARAGE REPAIRS**

**METZGER DR.  
EWING, N.J. 08628**

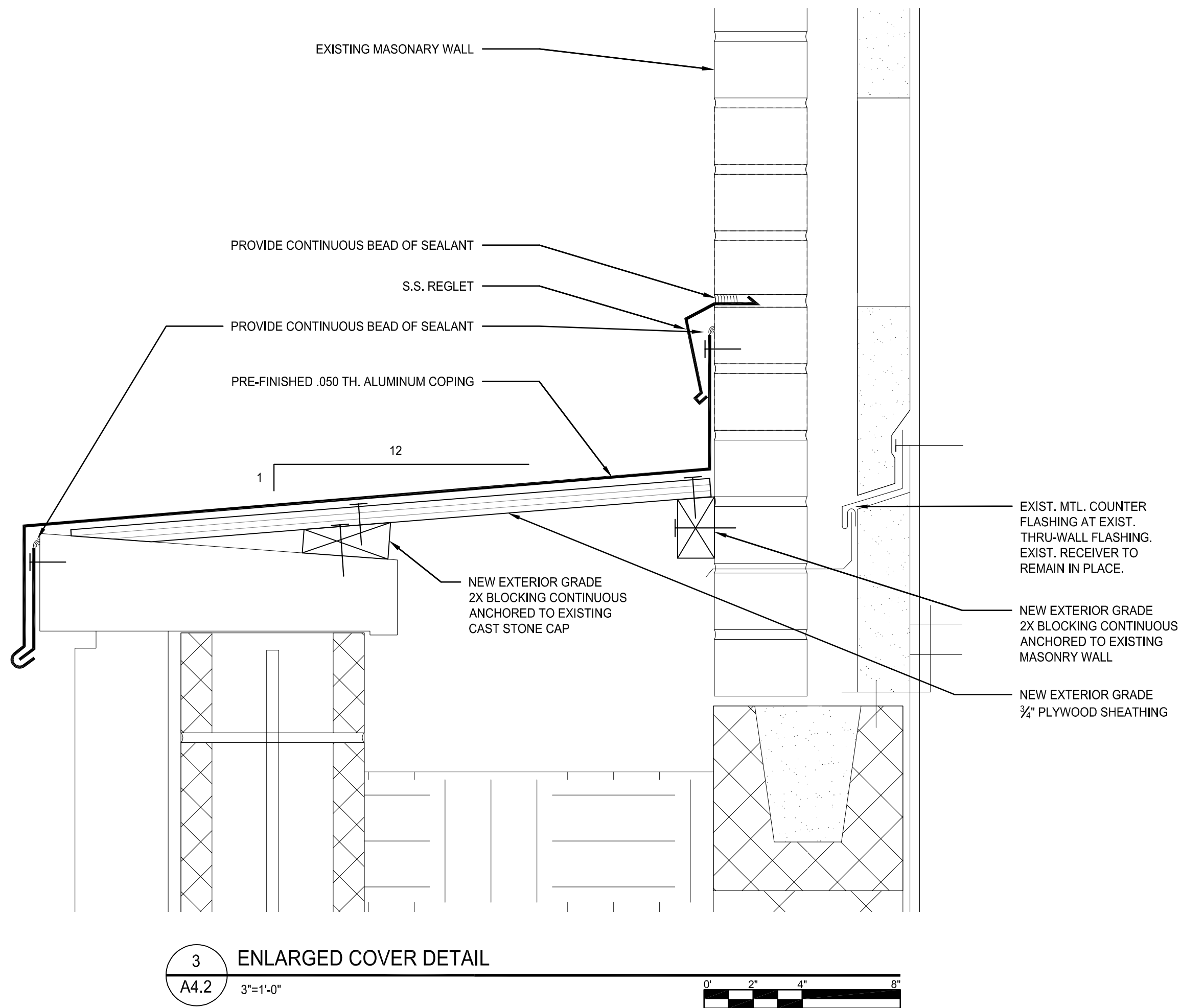
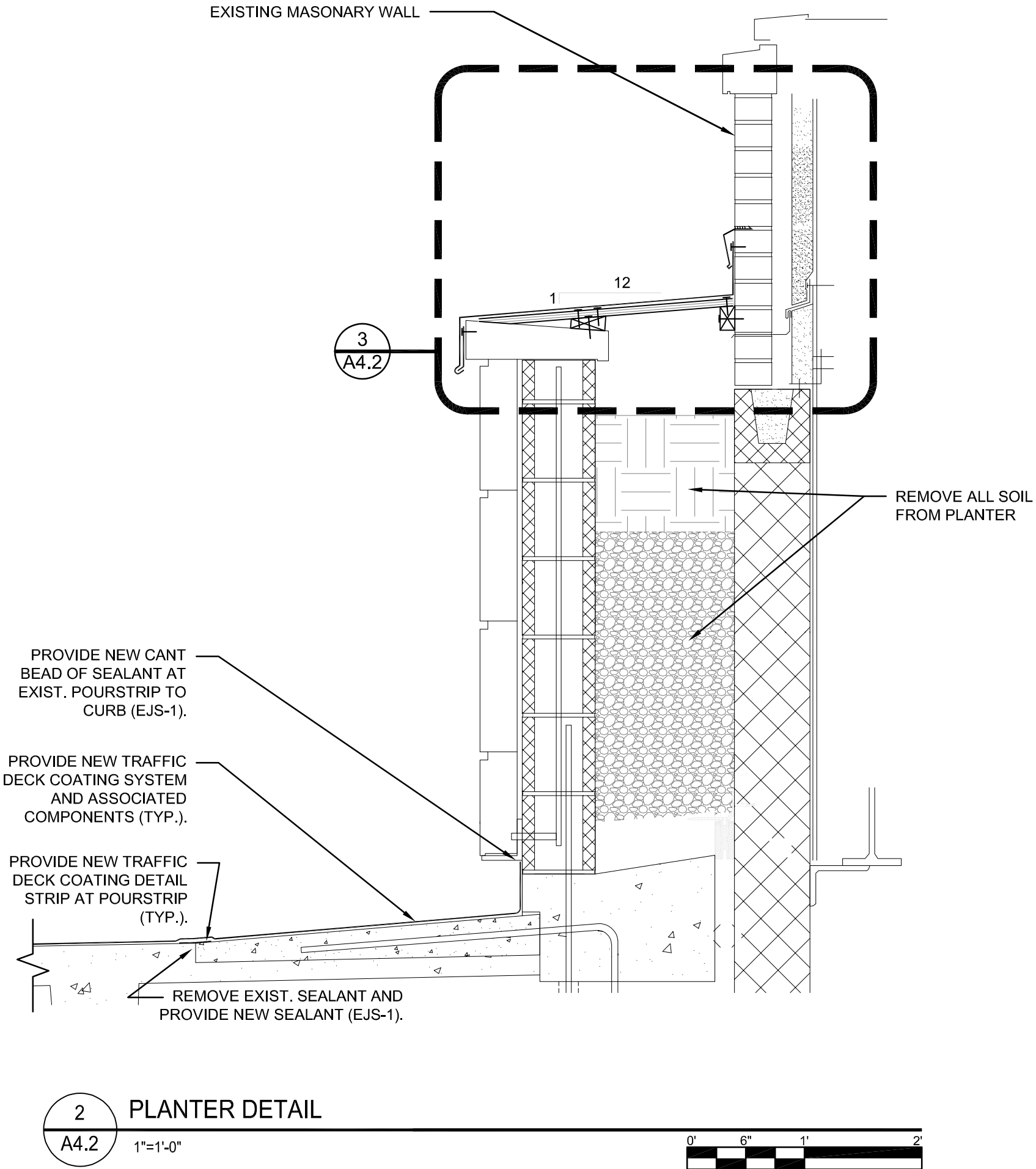
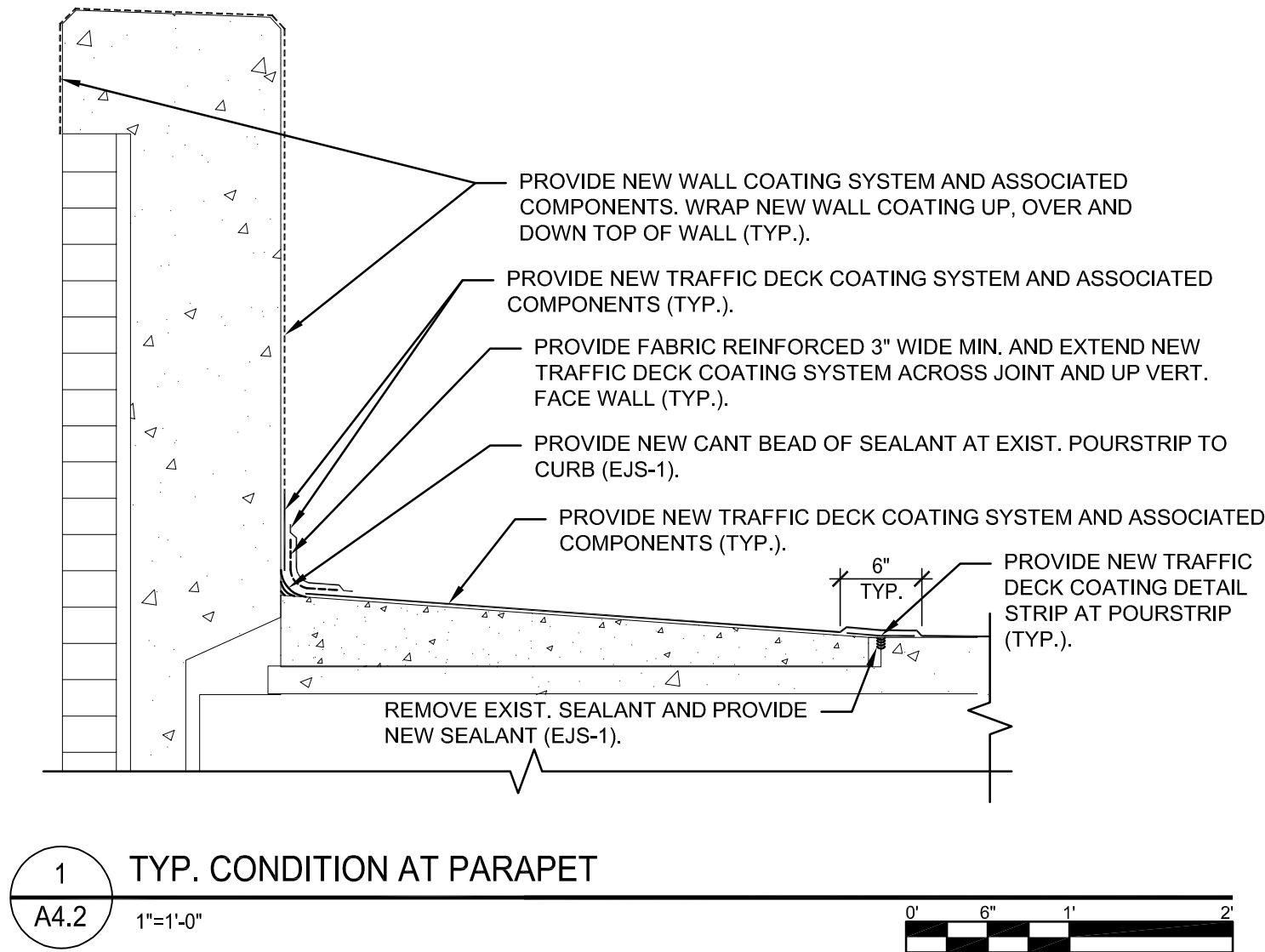
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SECTION 049010 - MASONRY RESTORATION

- PART 1 - GENERAL
- 1.1. RELATED DOCUMENTS
- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
- 1.2. SUMMARY
- A. THIS SECTION INCLUDES THE FOLLOWING:
1. CLEANING OF ALL EXPOSED MASONRY (BRICK AND CAST STONE) AS WELL AS CONCRETE SURFACES AT THE ENTIRETY OF THE PARKING GARAGE.
  2. BRICK REPLACEMENT AT ALL DAMAGED/CRACKED AREAS INDICATED WITHIN THE PROJECT DRAWINGS
  3. REPAIRING CAST STONE
  4. REPOINTING OF MORTAR JOINTS AT AREAS/EXTENT INDICATED WITHIN THE PROJECT DRAWINGS
- B. CLEAN/RESTORE ALL MASONRY (I.E. BRICK, CAST STONE, CONCRETE, ETC.) SURFACES OF THE GARAGE BOTH UPPER AND LOWER LEVEL TO THEIR ORIGINAL CONSTRUCTION CONDITIONS.
- B. RELATED SECTIONS INCLUDE THE FOLLOWING:
1. DIVISION 7 SECTION 079200 "JOINT SEALANTS" FOR SEALING JOINTS IN RESTORED MASONRY AT AREAS INDICATED.
- 1.3. DEFINITIONS
- A. VERY LOW-PRESSURE SPRAY: UNDER 100 PSI (690 KPA).
- B. LOW-PRESSURE SPRAY: 100 TO 400 PSI (69 TO 2750 KPA); 4 TO 6 GPM (0.25 TO 0.4 U.S).
- C. MEDIUM-PRESSURE SPRAY: 400 TO 800 PSI (2750 TO 5510 KPA); 4 TO 6 GPM (0.25 TO 0.4 U.S).
- D. HIGH-PRESSURE SPRAY: 800 TO 1200 PSI (5510 TO 8250 KPA); 4 TO 6 GPM (0.25 TO 0.4 U.S)
- E. **RESTORATION INTENT** INDICATED ALL AREAS, SURFACES AND SUBSTRATES **NOTED TO BE RESTORED/REPAIR**ED ARE TO BE PROPERLY PATCHED/REPAIRED AND CLEANED WITH THE HIGHEST QUALITY MATERIALS AND WORKMANSHIP TO RESEMBLE ITS ORIGINAL STATE.
- 1.4. THE ENTIRETY OF THE PARKING GARAGE IS TO BE RESTORED INCLUDING ADJACENT RETAINING WALLS
- A. PRECONSTRUCTION TESTING
- B. PRECONSTRUCTION TESTING SERVICE: ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM PRECONSTRUCTION TESTING ON MASONRY UNITS AS FOLLOWS.
1. PROVIDE TEST SPECIMENS AS DIRECTED BY ARCHITECT AND REPRESENTATIVE OF PROPOSED MATERIALS AND CONSTRUCTION
  2. EXISTING/ORIGINAL MORTAR: TEST ACCORDING TO ASTM C 295, MODIFIED AS AGREED BY TESTING SERVICE AND ARCHITECT FOR PROJECT REQUIREMENTS, TO DETERMINE PROPORTIONAL COMPOSITION OF ORIGINAL INGREDIENTS, SIZES AND COLORS OF AGGREGATES, AND APPROXIMATE STRENGTH. USE X-RAY DIFFRACTION, INFRARED SPECTROSCOPY, AND DIFFERENTIAL THERMAL ANALYSIS AS NECESSARY TO SUPPLEMENT MICROSCOPICAL METHODS AND PROVIDE A DETAILED RECOMMENDATION ON THE APPROPRIATE REPOINTING MORTAR MIXTURE RATIO, AGGREGATES, AND STRENGTH. CAREFULLY REMOVE EXISTING MORTAR FROM WITHIN JOINTS AT FIVE LOCATIONS PER SUBSTRATE/APPLICATION (I.E. BRICK AND STONE) DESIGNATED BY ARCHITECT.
- 1.5. ACTION SUBMITTALS
- A. PRODUCT DATA: FOR EACH PRODUCT INDICATED, INCLUDE RECOMMENDATIONS FOR APPLICATION, MIXING, STORAGE, AND CERTIFICATIONS SUBSTANTIATING THAT PRODUCTS COMPLY WITH REQUIREMENTS.
- B. SAMPLES FOR INITIAL SELECTION: FOR THE FOLLOWING:
1. POINTING MORTAR: SUBMIT SETS OF MORTAR FOR POINTING IN THE FORM OF SAMPLE MORTAR STRIPS, 6 INCHES LONG BY 1/2 INCH WIDE, SET IN ALUMINUM OR PLASTIC CHANNELS.
  - a. HAVE EACH SET CONTAIN A CLOSE COLOR RANGE OF AT LEAST (6) SIX SAMPLES OF DIFFERENT MIXES OF CEMENT, SANDS AND CEMENT THAT PRODUCE A MORTAR MATCHING THE CLEANED MASONRY WHEN CURED AND DRY.
  - b. SUBMIT WITH PRECISE MEASUREMENTS ON INGREDIENTS, PROPORTIONS, GRADATIONS, AND SOURCES OF COLORED SANDS FROM WHICH EACH SAMPLE WAS MADE.
  - c. PRODUCE SAMPLES UTILIZING SAMPLE CLEANER/CLEANING PROCEDURES TO BE EMPLOYED IN FINISHED PROJECT.
2. SEALANT MATERIALS: SEE SECTION 072000 "JOINT SEALANTS."
  3. INCLUDE SIMILAR SAMPLES OF ACCESSORIES INVOLVING COLOR SELECTION.
  4. PATCHING COMPOUND: SUBMIT SETS OF PATCHING COMPOUND SAMPLES IN THE FORM OF PLUGS (PATCHES) IN DRILLER'S HOLES IN SAMPLE UNITS OF STONE REPRESENTATIVE OF THE RANGE OF STONE COLORS ON THE BUILDING.
- C. SAMPLES FOR VERIFICATION, BEFORE ERECTING THE MOCKUP, OF THE FOLLOWING:
1. EACH NEW EXPOSED MASONRY MATERIAL TO BE USED FOR REPLACING EXISTING MATERIALS. INCLUDE IN EACH SET OF SAMPLES THE FULL RANGE OF COLORS AND TEXTURES TO BE EXPECTED IN THE COMPLETED WORK.
  - a. PROVIDE STRIPS OF MORTAR, 6 INCHES LONG BY 1/2 INCH WIDE, SET IN ALUMINUM OR PLASTIC CHANNELS.
  - b. EACH TYPE OF MASONRY PATCHING COMPOUND IN FORM OF BRIQUETTES, AT LEAST 3 INCHES (75 MM) LONG BY 1-1/2 INCHES (38 MM) WIDE. DOCUMENT EACH SAMPLE WITH MANUFACTURER AND STOCK NUMBER OR OTHER INFORMATION NECESSARY TO MAKE ADDITIONAL MATERIAL.
  3. EACH TYPE OF ADHESIVE.
  4. EACH TYPE OF MORTAR FOR POINTING AND MASONRY REBUILDING AND REPAIR IN THE FORM OF SAMPLE MORTAR STRIPS, 6 INCHES LONG BY 1/2 INCH WIDE, SET IN ALUMINUM OR PLASTIC CHANNELS.
  - a. INCLUDE WITH EACH SAMPLE A LIST OF INGREDIENTS WITH PROPORTIONS OF EACH, IDENTIFY SOURCES, BOTH SUPPLY AND QUANTITY, OF EACH TYPE OF SAND AND BRAND NAMES OF CEMENTITIOUS MATERIALS AND PIGMENTS IF ANY.
  - b. PRODUCE SAMPLES UTILIZING SAMPLE CLEANER/CLEANING PROCEDURES TO BE EMPLOYED IN FINISHED PROJECT.
5. SEALANT MATERIALS: SEE SECTION 072000 "JOINT SEALANTS."
  6. ACCESSORIES: EACH TYPE OF ANCHOR, ACCESSORY, AND MISCELLANEOUS SUPPORT. INFORMATIONAL SUBMITTALS
- 1.6. QUALIFICATION DATA
- A. QUALIFICATION DATA: FOR FIRMS AND PERSONS SPECIFIED IN "QUALITY ASSURANCE" ARTICLE TO DEMONSTRATE THEIR CAPABILITIES AND EXPERIENCE. INCLUDE LISTS OF COMPLETED PROJECTS WITH PROJECT NAMES AND ADDRESSES, NAMES AND ADDRESSES OF ARCHITECTS AND OWNERS, AND OTHER INFORMATION SPECIFIED.
- B. OPERATION OUTLINE FOR EACH PHASE OF THE WORK PROCESS, INCLUDING PROTECTION OF SURROUNDING MATERIALS ON THE BUILDING AND PROJECT SITE DURING OPERATIONS. DESCRIBE IN DETAIL THE MATERIALS, METHODS, EQUIPMENT, AND SEQUENCE OF OPERATIONS TO BE USED FOR EACH PHASE OF THE RESTORATION WORK.
1. IF ALTERNATIVE MATERIALS AND METHODS TO THOSE INDICATED ARE PROPOSED FOR ANY PHASE, A WRITTEN DESCRIPTION, INCLUDING EVIDENCE OF SUCCESSFUL USE ON OTHER COMPARABLE PROJECTS, AND A TESTING PROGRAM TO DEMONSTRATE THEIR EFFECTIVENESS FOR THIS PROJECT.
  2. RESTORATION PROGRAM: FOR EACH PHASE OF RESTORATION PROCESS, PROVIDE DETAILED DESCRIPTION OF MATERIALS, METHODS, EQUIPMENT, AND SEQUENCE OF OPERATIONS TO BE USED FOR EACH PHASE OF RESTORATION WORK INCLUDING PROTECTION OF SURROUNDING MATERIALS ON BUILDING AND PROJECT SITE.
  3. INCLUDE METHODS FOR KEEPING POINTS FOR ASSOCIATED MATERIALS DURING PERIOD.
  4. IF MATERIALS AND METHODS OTHER THAN THOSE INDICATED ARE PROPOSED FOR ANY PHASE OF RESTORATION WORK, PROVIDE A WRITTEN DESCRIPTION, INCLUDING EVIDENCE OF SUCCESSFUL USE ON OTHER COMPARABLE PROJECTS, AND A TESTING PROGRAM TO DEMONSTRATE THEIR EFFECTIVENESS FOR THIS PROJECT.
- D. CLEANING PROGRAM INDICATING CLEANING PROCESS, INCLUDING PROTECTION OF SURROUNDING MATERIALS ON BUILDING AND PROJECT SITE, AND CONTROL OF RUNOFF DURING OPERATIONS. DESCRIBE IN DETAIL THE MATERIALS, METHODS, AND EQUIPMENT TO BE USED.
1. IF MATERIALS AND METHODS OTHER THAN THOSE INDICATED ARE PROPOSED FOR CLEANING, PROVIDE A WRITTEN DESCRIPTION, INCLUDING EVIDENCE OF SUCCESSFUL USE ON OTHER COMPARABLE PROJECTS, AND A TESTING PROGRAM TO DEMONSTRATE THEIR EFFECTIVENESS FOR THIS PROJECT.
- 1.7. QUALITY ASSURANCE
- A. REHABILITATION SPECIALIST: ENGAGE AN EXPERIENCED MASONRY RESTORATION AND CLEANING FIRM THAT HAS COMPLETED WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED. PROVIDE A WRITTEN DESCRIPTION OF THE FIRM'S IN-SERVICE PERFORMANCE, EXPERIENCE INSTALLING STANDARD UNIT MASONRY IS NOT SUFFICIENT EXPERIENCE FOR MASONRY RESTORATION WORK.
1. AT CONTRACTORS OPTION, THE WORK MAY BE DIVIDED BETWEEN 2 SPECIALIST FIRMS: 1 FOR CLEANING WORK AND 1 FOR REPAIR WORK.
  2. FIELD SUPERVISION: REQUIRE RESTORATION SPECIALIST FIRMS TO MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR ON THE PROJECT SITE DURING TIMES THAT CLAY MASONRY RESTORATION AND CLEANING IS IN PROGRESS. SUPERVISORS SHALL NOT BE CHANGED DURING PROJECT EXCEPT FOR CAUSES BEYOND THE CONTROL OF RESTORATION SPECIALIST FIRM.
  3. WORKER QUALIFICATION: PERSONS WHO ARE EXPERIENCED IN RESTORATION WORK OF TYPES THEY WILL BE PERFORMING, WHEN STONE UNITS ARE BEING PATCHED, ASSIGN AT LEAST ONE WORKER AMONG THOSE PERFORMING AS RESTORATION SPECIALIST AND CERTIFIED BY MANUFACTURER OF PATCHING COMPOUND TO APPLY ITS PRODUCTS.
- B. CHEMICAL CLEANER MANUFACTURER QUALIFICATIONS: A FIRM REGULARLY ENGAGED IN PRODUCING MASONRY CLEANERS THAT HAVE BEEN USED FOR SIMILAR APPLICATIONS WITH SUCCESSFUL RESULTS, AND WITH FACTORY-TRAINED REPRESENTATIVES WHO ARE AVAILABLE FOR CONSULTATION AND PROJECT-SITE INSPECTION AND ASSISTANCE AT NO ADDITIONAL COST.
- C. CONSOLIDANT MANUFACTURER QUALIFICATIONS: A FIRM REGULARLY ENGAGED IN PRODUCING STONE CONSOLIDANTS THAT HAVE BEEN USED FOR SIMILAR APPLICATIONS WITH SUCCESSFUL RESULTS, AND WITH FACTORY-TRAINED REPRESENTATIVES WHO ARE AVAILABLE FOR CONSULTATION AND PROJECT-SITE INSPECTION AND ASSISTANCE AT NO ADDITIONAL COST.
- D. CLEANING AND REPAIR APPEARANCE STANDARD: CLEANED AND REPAIRED SURFACES ARE TO HAVE A UNIFORM APPEARANCE AS VIEWED FROM 20 FEET AWAY BY ARCHITECT. REPAIR ADDITIONAL, PAINT AND STAIN REMOVAL, GENERAL CLEANING, AND SPOT CLEANING OF SMALL AREAS, ETC. THAT ARE NOTICEABLY DIFFERENT, SO THAT SURFACE BLENDS SMOOTHLY INTO SURROUNDING AREAS.
- E. MOCKUPS: PREPARE FIELD SAMPLES FOR RESTORATION METHODS AND CLEANING PROCEDURES TO DEMONSTRATE AESTHETIC EFFECTS AND QUALITIES OF MATERIALS AND EXECUTION. USE MATERIALS AND METHODS PROPOSED FOR COMPLETED WORK AND PREPARE SAMPLES UNDER SAME WEATHER CONDITIONS TO BE EXPECTED DURING REMAINDER OF WORK.
1. LOCATE MOCKUPS ON THE BUILDING WHERE DIRECTED BY ARCHITECT.
  - a. PROVIDE A MINIMUM OF THREE (3) REPOINTING MOCKUPS, ONE (1) AT EACH ELEVATION
  2. MASONRY REPAIR: PREPARE SAMPLE PANELS OF SIZE DIRECTED BY ARCHITECT FOR EACH TYPE OF MASONRY MATERIAL INDICATED TO BE PATCHED, REBUILT, OR REPLACED. ERECT SAMPLE PANELS INTO AN EXISTING WALL TO DEMONSTRATE THE QUALITY OF MATERIALS AND WORKMANSHIP. PANEL TO BE A MINIMUM OF 9 SQ FT IN AREA
  3. CLEANING: PREPARE SAMPLE APPROXIMATELY 25 SQ. FT. IN AREA FOR EACH TYPE OF MASONRY AND SURFACE CONDITION.
  - a. TEST CLEANERS AND METHODS ON SAMPLES OF ADJACENT MATERIALS FOR

- POSSIBLE ADVERSE REACTIONS, UNLESS CLEANERS AND METHODS ARE KNOWN TO HAVE A DELETERIOUS EFFECT.
- b. ALLOW A WAITING PERIOD OF NOT LESS THAN 7 DAYS AFTER COMPLETION OF SAMPLE CLEANING TO PERMIT A STUDY OF SAMPLE PANELS FOR NEGATIVE REACTIONS.
  4. REPOINTING: PREPARE 2 SEPARATE SAMPLE AREAS APPROXIMATELY 12 INCHES HIGH BY 12 INCHES WIDE MINIMUM FOR EACH TYPE OF REPOINTING REQUIRED: 1 FOR DEMONSTRATING METHODS AND QUALITY OF MORTAR COLORS EXPECTED; 2 FOR MORTAR FROM JOINTS AND THE OTHER FOR DEMONSTRATING QUALITY OF MATERIALS AND WORKMANSHIP EXPECTED IN POINTING MORTAR JOINTS.
  5. NOTIFY ARCHITECT 7 DAYS IN ADVANCE OF THE DATES AND TIMES WHEN SAMPLES WILL BE REPOINTED.
  6. OBTAIN ARCHITECT'S APPROVAL OF MOCKUPS BEFORE STARTING THE REMAINDER OF MASONRY RESTORATION AND CLEANING.
  7. MAINTAIN MOCKUPS DURING CONSTRUCTION IN AN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING THE COMPLETED WORK.
- F. PREINSTALLATION CONFERENCE: CONDUCT A PREINSTALLATION CONFERENCE AT PROJECT SITE NO LATER THAN 14 DAYS PRIOR TO THE START OF THE WORK.
- A. ATTENDEES: INSTALLER, INSTALLERS JOB SUPERINTENDENT AND/OR FOREMAN AND REPRESENTATIVES OF MANUFACTURERS AS WELL AS SUB-CONTRACTORS INVOLVED IN OR AFFECTED BY THE INSTALLATION AND ITS COORDINATION OR INTEGRATION WITH OTHER MATERIALS AND INSTALLATIONS THAT HAVE PRECEDED OR WILL FOLLOW. SHALL ATTEND THE MEETING, ADVISE ARCHITECT OF SCHEDULED MEETING DATES.
2. AGENDA: REVIEW PROGRESS OF OTHER CONSTRUCTION ACTIVITIES AND PREPARATIONS FOR THE PARTICULAR ACTIVITY UNDER CONSIDERATION, INCLUDING BUT NOT LIMITED TO REQUIREMENTS FOR THE FOLLOWING:
- a. CONTRACT DOCUMENTS.
  - b. MORTAR.
  - c. SUBMITTALS.
  - d. REVIEW OF MOCKUPS.
  - e. POSSIBLE CONFLICTS.
  - f. COMPATIBILITY PROBLEMS.
  - g. TIME SCHEDULES.
  - h. WEATHER LIMITATIONS.
  - i. MANUFACTURERS WRITTEN RECOMMENDATIONS.
  - j. WARRANTY REQUIREMENTS.
  - k. COMPATIBILITY OF MATERIALS.
  - l. ACCEPTABILITY OF SUBSTRATES.
  - m. SPACE AND ACCESS LIMITATIONS.
  - n. TESTING AND INSPECTING REQUIREMENTS.
  - o. REQUIRED PERFORMANCE STANDARDS.
  - p. PROTECTION OF CONSTRUCTION AND PERSONNEL.
3. RECORD: SIGNIFICANT CONFERENCE DISCUSSIONS, AGREEMENTS, AND DISAGREEMENTS.
4. DO NOT PROCEED WITH INSTALLATION IF THE CONFERENCE CANNOT BE SUCCESSFULLY CONCLUDED. INITIATE WHATEVER ACTIONS ARE NECESSARY TO RESOLVE IMPEDIMENTS TO PERFORMANCE OF THE WORK AND RECONVENE THE CONFERENCE AT EARLIEST FEASIBLE DATE.
- 1.8. DELIVERY, STORAGE, AND HANDLING
- A. CAREFULLY PACK, HANDLE, AND SHIP MASONRY UNITS AND ACCESSORIES STRAPPED TOGETHER IN SUITABLE PACKS OR PALLETS OR IN HEAVY DUTY CARTONS.
- B. DELIVER OTHER MATERIALS TO PROJECT SITE IN MANUFACTURER'S ORIGINAL AND UNOPENED CONTAINERS, LABELED WITH TYPE AND NAME OF PRODUCTS AND MANUFACTURERS.
- C. STORE CEMENTITIOUS MATERIALS OFF THE GROUND, UNDER COVER, AND IN A DRY LOCATION.
- D. STORE AGGREGATES OFF THE GROUND, COVERED AND IN A DRY LOCATION, WHERE GRADING AND OTHER REQUIRED CHARACTERISTICS CAN BE MAINTAINED AND CONTAMINATION AVOIDED.
- E. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR MINIMUM AND MAXIMUM TEMPERATURE REQUIREMENTS FOR STORAGE.
- F. DO NOT USE PINCH OR WRECKING BARS ON STONEWORK.
- G. LIFT STONEWORK WITH WIDE-BELT TYPE SLINGS WHERE POSSIBLE; DO NOT USE WIRE ROPE OR ROPES CONTAINING TAR OR OTHER HARMFUL SUBSTANCES WHICH MIGHT CAUSE STAINING.
- H. STORE STONE ON NON-STAINING WOOD SKIDS OR PALLETS, COVERED WITH NON-STAINING, WATERPROOF MEMBRANE, PLANE AND STACK SKIDS AND STONE TO DISTRIBUTE WEIGHT EVENLY AND TO PREVENT BREAKAGE OR CRACKING OF STONES.
- 1.9. PROJECT CONDITIONS
- A. DO NOT REPOINT MORTAR JOINTS OR REPAIR MASONRY UNLESS AIR TEMPERATURE IS BETWEEN 40 DEG F AND 90 DEG F AND WILL REMAIN SO FOR AT LEAST 48 HOURS AFTER COMPLETION OF WORK.
- B. COLD-WEATHER REQUIREMENTS: COMPLY WITH THE FOLLOWING PROCEDURES FOR MASONRY REPAIR AND MORTAR-JOINT POINTING.
1. COMPLY WITH THE BRICK INDUSTRY ASSOCIATION (BIA) TECHNICAL DOCUMENTS FOR COLD AND HOT WEATHER CONSTRUCTION, CURRENT EDITION/PUBLICATION.
  2. WHEN AIR TEMPERATURE IS BELOW 40 DEG F (4 DEG C) HEAT MORTAR INGREDIENTS, MASONRY REPAIR MATERIALS, AND EXISTING MASONRY WALLS TO PRODUCE TEMPERATURES BETWEEN 40 AND 120 DEG F (4 AND 49 DEG C).
  3. WHEN MEAN DAILY AIR TEMPERATURE IS BELOW 40 DEG F (4 DEG C), PROVIDE ENCLOSURE AND HEAT TO MAINTAIN MORTAR AND MASONRY AT 40 DEG F (10 DEG C) WITHIN THE ENCLOSURE FOR 7 DAYS AFTER REPAIR AND POINTING.
- C. HOT-WEATHER REQUIREMENTS: PROTECT RESTORATION WORK WHEN TEMPERATURE AND HUMIDITY CONDITIONS PRODUCE EXCESSIVE EVAPORATION OF WATER FROM MORTAR AND PATCHING MATERIALS. PROVIDE ARTIFICIAL SHADING AND WIND BREAKS. DO NOT USE COOLED MATERIALS AS REQUIRED. DO NOT APPLY MORTAR TO SUBSTRATES WITH TEMPERATURES OF 90 DEG F AND ABOVE.
- D. COMPLY WITH THE BRICK INDUSTRY ASSOCIATION (BIA) TECHNICAL DOCUMENTS FOR COLD AND HOT WEATHER CONSTRUCTION, CURRENT EDITION/PUBLICATION.
- E. PREVENT GROUT OR MORTAR USED IN REPOINTING AND REPAIR WORK FROM STAINING FACE OF SURROUNDING MASONRY. REMOVE EXCESS GROUT IMMEDIATELY. REMOVE GROUT AND MORTAR IN CONTACT WITH EXPOSED MASONRY AND OTHER SURFACES.
- F. PROTECT SILLS, LEDGES, PROJECTIONS, ETC. FROM MORTAR DROPPINGS.
- G. IMMEDIATELY CLEAN ALL SURFACES AFFECTED BY THE POINTING WORK.
- 1.10. SEQUENCING AND SCHEDULING
- A. ORDER REPLACEMENT MATERIALS AT THE EARLIEST POSSIBLE DATE, TO AVOID DELAYING COMPLETION OF THE WORK.
- B. PERFORM MASONRY RESTORATION WORK IN THE FOLLOWING SEQUENCE:
1. INSPECT FOR OPEN MORTAR JOINTS AND REPAIR BEFORE CLEANING TO PREVENT THE INTRUSION OF WATER AND OTHER CLEANING MATERIALS INTO THE WALL.
  2. CLEAN MASONRY SURFACES.
  3. RAKE OUT MORTAR FROM JOINTS SURROUNDING MASONRY TO BE REPLACED AND FROM JOINTS ADJACENT TO MASONRY REPAIRS ALONG JOINTS.
  4. REPAIR MASONRY SURFACES, INCLUDING REPLACING EXISTING MASONRY WITH NEW MASONRY MATERIALS.
  5. RAKE OUT MORTAR FROM JOINTS TO BE REPOINTED.
  6. POINT MORTAR AND SEALANT MATERIALS.
  7. AFTER REPAIRS AND REPOINTING HAVE BEEN COMPLETED AND CURED, PERFORM A FINAL CLEANING TO REMOVE RESIDUES FROM THIS WORK.
  8. INSPECT FOR OPEN MORTAR JOINTS AND REPAIR BEFORE CLEANING TO PREVENT THE INTRUSION OF WATER AND OTHER CLEANING MATERIALS INTO THE WALL.
  9. CLEAN MASONRY SURFACES.

PART 2 - PRODUCTS

- 2.1. MASONRY MATERIALS
- A. BASIS-OF-DESIGN PRODUCT: THE DESIGN FOR THE MASONRY REPAIR/RESTORATION SYSTEMS IS BASED ON THE PRODUCTS AND MANUFACTURER(S) SPECIFIED, SUBJECT TO COMPLIANCE WITH THE NAMED PRODUCT.
1. ALL SUBSTITUTE PRODUCTS SHALL MEET OR EXCEED THE PERFORMANCE CRITERIA OF THE DESIGNED PRODUCT, SUBMIT, FOR REVIEW, A DETAILED SIDE-BY-SIDE COMPARISON SHOWING COMPARABILITY OF SUBSTITUTE PRODUCT WITH THE PERFORMANCE AND WARRANTY CRITERIA OF THE DESIGN PRODUCT.
  2. CONTRACTOR TO BEAR ALL COSTS ASSOCIATED WITH THE ARCHITECT'S REVIEW OF SUBSTITUTED PRODUCTS. THE CONTRACT AMOUNT TO BE REVISED VIA A CREDIT CHANGE ORDER TO THE OWNER AT THE DISCRETION OF THE ARCHITECT. PROFESSIONAL FEES AND COSTS, OR PAID DIRECTLY TO THE ARCHITECT BY THE CONTRACTOR.
- B. REPLACEMENT FACE BRICK AND ACCESSORIES (FOR AREAS OF BROKEN/DAMAGED BRICK): PROVIDE FACE BRICK AND ACCESSORIES, INCLUDING SPECIALLY MOLDED, GROUND, CUT, OR SAVED SHAPES WHERE REQUIRED TO COMPLETE MASONRY RESTORATION WORK.
1. PROVIDE UNITS WITH COLOR, SURFACE TEXTURE, SIZE, AND SHAPE TO MATCH EXISTING BRICK WORK AND WITH PHYSICAL PROPERTIES NOT LESS THAN THOSE DETERMINED FROM PRECONSTRUCTION TESTING OF SELECTED EXISTING UNITS.
  - a. FOR EXISTING BRICKWORK THAT EXHIBITS A RANGE OF COLORS, PROVIDE BRICK THAT MATCHES THAT RANGE RATHER THAN BRICK THAT MATCHES AN INDIVIDUAL COLOR WITHIN THAT RANGE.
- C. WATER: POTABLE.
- D. MORTAR MATERIALS
- A. PORTLAND CEMENT: ASTM C 150, TYPE I OR TYPE II, WHITE OR GRAY OR BOTH WHERE REQUIRED FOR COLOR MATCHING OF EXPOSED MORTAR.
1. PROVIDE CEMENT CONTAINING NOT MORE THAN 0.80 PERCENT TOTAL ALKALI WHEN TESTED ACCORDING TO ASTM C 144.
  2. HYDRATED LIME: ASTM C 207, TYPE S.
  3. MORTAR SAND: ASTM C 144 UNLESS OTHERWISE INDICATED.
- B. COLORED: PROVIDE NATURAL OR SYNTHETIC IRON OXIDES, GRANITE, OR OTHER SOUND STONE OF COLOR NECESSARY TO PRODUCE REQUIRED MORTAR COLOR.
2. FOR POINTING MORTAR, PROVIDE SAND WITH ROUNDED EDGES.
3. MATCH SIZE, TEXTURE, AND GRADATION OF EXISTING MORTAR SAND AS CLOSELY AS POSSIBLE. BLEND SEVERAL SANDS IF NECESSARY TO ACHIEVE SUITABLE MATCH.
- D. MORTAR PIGMENTS: NATURAL AND SYNTHETIC IRON OXIDES, COMPOUNDED FOR MORTAR MIXES. USE ONLY PIGMENTS WITH A RECORD OF SATISFACTORY PERFORMANCE IN MASONRY MORTARS.
- E. WATER: POTABLE.
- 2.3. MORTAR MIXES
- A. MEASUREMENT AND MIXING: MEASURE CEMENTITIOUS MATERIALS AND SAND IN A DRY CONDITION BY VOLUME OR EQUIVALENT WEIGHT. DO NOT MEASURE BY SHOVEL; USE KNOWN MEASURE. MIX MATERIALS IN A CLEAN, MECHANICAL BATCH MIXER.
1. MIXING POINTING MORTAR: THOROUGHLY MIX CEMENTITIOUS MATERIALS AND SAND TOGETHER BEFORE ADDING ANY WATER. THEN MIX AGAIN, ADDING ONLY ENOUGH WATER TO PRODUCE A DAMP, UNWORKABLE MIX THAT WILL RETAIN ITS FORM WHEN PRESSED INTO A BALL. MAINTAIN MORTAR IN THIS DAMPENED CONDITION FOR 15 TO 30 MINUTES. ADD REMAINING WATER IN SMALL PORTIONS UNTIL MORTAR REACHES DESIRED CONSISTENCY. USE MORTAR WITHIN ONE HOUR OF FINAL MIXING; DO NOT RETEMPER OR USE PARTIALLY HARDENED MATERIAL.
  2. COLORED MORTAR: PRODUCE MORTAR OF COLOR REQUIRED TO MATCH EXISTING. DO NOT ALTER SPECIFIED PROPORTIONS WITHOUT ARCHITECT'S APPROVAL.
  1. MORTAR PIGMENTS: WHERE MORTAR PIGMENTS ARE REQUIRED TO MATCH EXISTING, DO NOT EXCEED A PIGMENT-TO-CEMENT RATIO OF 1:10 BY WEIGHT.
  2. COLORED-AGGREGATE MORTAR: PRODUCE COLOR REQUIRED BY COMBINING COLORED AGGREGATES WITH PORTLAND CEMENT OF SELECTED COLOR.
  3. DO NOT USE ADMIXTURES IN MORTAR UNLESS OTHERWISE INDICATED.

- MORTAR PROPORTIONS: MIX MORTAR MATERIALS IN THE FOLLOWING PROPORTIONS:
1. PORTLAND CEMENT-LIME MORTAR FOR BRICK AND STONE: COMPLY WITH ASTM C 270, PROPORTION SPECIFICATION, FOR TYPES OF N MORTAR FOR POINTING OF BRICK.
- a. 1 PART PORTLAND CEMENT, 1 PARTS LIME, AND 6 PARTS SAND
  - b. ADD MORTAR PIGMENTS TO PRODUCE MORTAR COLORS REQUIRED.
  - c. NOTE: MORTAR PROPORTIONS MAY BE ADJUSTED BASED UPON PRECONSTRUCTION TESTING REPORT
2. MORTAR TO MATCH THE EXISTING/ORIGINAL, CLEANED MORTAR FINISH, COLOR AND TEXTURE.
- F. JOINT SEALANT INSTALLATION: PREPARE JOINTS AND APPLY SEALANTS OF TYPE AND AT LOCATIONS INDICATED TO COMPLY WITH APPLICABLE REQUIREMENTS IN DIVISION 7 SECTION 072000 "JOINT SEALANTS."
- G. CLEAN BRICK NO FEWER THAN SIX DAYS AFTER COMPLETION OF POINTING AND SEALING, USING CLEAN WATER AND STIFF-BRISTLE FIBER BRUSHES. DO NOT USE WIRE BRUSHES. ACID-TYPE CLEANING AGENTS OR CLEANING AGENTS CONTAINING CAUSTIC COMPOUNDS OR ABRASIVES, OR OTHER MATERIALS OR METHODS THAT COULD DAMAGE MASONRY.
- 2.4. MASONRY ANCHORS
- A. PROVIDE NEW MASONRY VENEER ANCHORS AT ALL AREAS OF BRICK REMOVAL AND REPLACEMENT OUTLINED WITHIN THE PROJECT DRAWINGS PER REMEDIAL WORK NOTE 'D'
1. MASONRY ANCHORS.
  - a. BASIS-OF-DESIGN: HB 5213 AS MANUFACTURED BY HECKMANN BUILDING PRODUCTS.
  - 1) BACKPILE MATERIALS:
  - a) STAINLESS STEEL TYPE 304.
  - b) THICKNESS: 14 GA.
2. MASONRY TIES
  - a. MASONRY VENEER TIES: PROVIDE MINIMUM 2 INCHES (50 MM) EMBEDMENT IN EXISTING MORTAR.
  - b. BASIS-OF-DESIGN: 2X-HOOK WIRE TIE AS MANUFACTURED BY HECKMANN BUILDING PRODUCTS
  - 1) WIRE-TIE MATERIALS:
  - a) STAINLESS STEEL TYPE 304.
  - b) WIRE: 3/16 INCH (4.76 MM) DIAMETER ASTM A 580/A 580M
- B. SPACING: 16" O.C. MAXIMUM HORIZONTALLY AND VERTICALLY. INSTALL AT LOCATIONS TO AVOID PENETRATING FLASHINGS.
- 2.5. MASONRY REPAIR MATERIALS
- A. STONE PATCHING COMPOUND: FACTORY-MIXED CEMENTITIOUS PRODUCT THAT IS CUSTOM MANUFACTURED FOR PATCHING STONE. IS VAPOR- AND WATER PERMEABLE. EXHIBITS LOW SHRINKAGE, AND DEVELOPS HIGH BOND STRENGTH TO ALL TYPES OF STONE. FORMULATE IN COLORS AND TEXTURES TO MATCH STONE BEING PATCHED. PROVIDE NOT LESS THAN 3/4 INCHES (19 MM) OF STONE PATCHING COMPOUND IN COLORS, TEXTURES, AND GRAIN TO MATCH STONE BEING PATCHED. PROVIDE SUFFICIENT NUMBER OF COLORS TO ENABLE MATCHING EACH PIECE OF STONE.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE THE FOLLOWING:
  - a. CATHEDRAL STONE PRODUCTS, INC.; JAHN RESTORATION MORTAR.
  - b. CONPROCO; MATRIX
  - c. EDISON COATINGS, INC.; CUSTOM SYSTEM 45
2. USE FORMULATION THAT IS VAPOR- AND WATER PERMEABLE (EQUAL TO OR MORE THAN THE STONE), EXHIBITS LOW SHRINKAGE, HAS LOWER MODULUS OF ELASTICITY THAN THE STONE UNITS BEING REPAIRED, AND DEVELOPS HIGH BOND STRENGTH TO ALL TYPES OF STONE.
  3. USE FORMULATION HAVING WORKING QUALITIES AND RETARDATION CONTROL TO PERMIT FORMING AND SCULPTURING WHERE NECESSARY.
  4. FORMULATE PATCHING COMPOUND IN COLORS, TEXTURES, AND GRAIN TO MATCH STONE BEING PATCHED. PROVIDE SUFFICIENT NUMBER OF COLORS TO ENABLE MATCHING EACH PIECE OF STONE.
- 2.6. CLINGING MATERIALS
- A. WATER FOR CLEANING: POTABLE.
- B. HOT WATER: WATER HEATED TO A TEMPERATURE OF 140 TO 160 DEG F.
- C. JOB-MIXED DETERGENT SOLUTION: SOLUTION PREPARED BY MIXING 2 CUPS OF TEMPERATURE-SENSITIVE POLYPHOSPHATE, 1/2 CUP OF LAUNDRY DETERGENT (TIDE, ALL, ETC.), 5 QUARTS OF 5 PERCENT SODIUM HYPOCHLORITE (BLEACH), AND 15 QUARTS OF WARM WATER FOR EACH 5 GAL. OF SOLUTION REQUIRED, OR APPROVED PRE-MIXED EQUAL.
- D. CLEAN MASONRY SURFACES: CLEAN BRICK REPAIR/REPOINTING INDICATED WITHIN DRAWINGS.
- 2.7. CHEMICAL CLEANING SOLUTIONS
- A. DILUTE CHEMICAL CLEANERS WITH WATER TO PRODUCE SOLUTIONS NOT EXCEEDING 1 PERCENT CONCENTRATION BY VOLUME. CLEANER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- B. ACIDIC CLEANER SOLUTION FOR UNPOLISHED STONE: DILUTE WITH WATER TO PRODUCE 1% HYDROFLUORIC ACID CONTENT OF 3 PERCENT OR LESS, BUT NOT GREATER THAN THAT RECOMMENDED BY THE MANUFACTURER.
- C. USE ONLY UNPOLISHED, GRANITE, UNPOLISHED DOLOMITE MARBLES, AND SILICEOUS SANDSTONE.
- D. ACIDIC CLEANER FOR POLISHED STONE: DILUTE WITH WATER TO CONCENTRATION OF 1 PERCENT. TEST BY TESTING THAT DOES NOT ETCH OR OTHERWISE DAMAGE POLISHED SURFACE, BUT NOT GREATER THAN THAT RECOMMENDED BY CHEMICAL CLEANER MANUFACTURER.
- E. CLEAN ONLY ON POLISHED GRANITES AND POLISHED DOLOMITE MARBLES.

PART 3 - EXECUTION

- 3.1. PROTECTION
- A. PROTECT BUILDINGS, MOTOR VEHICLES, SURROUNDING SURFACES OF BUILDING BEING RESTORED, PERSONS, PLANTS, AND SURROUNDING BUILDINGS FROM HARM RESULTING FROM MASONRY RESTORATION WORK.
1. ERECT TEMPORARY PROTECTIVE COVERS OVER WALKWAYS AND AT POINTS OF ENTRY AND EXIT TO MAINTAIN CLEAN, DRY, AND SAFE ACCESS TO WORK AREAS DURING COURSE OF RESTORATION AND CLEANING WORK.
- B. PREVENT MORTAR FROM STAINING FACE OF SURROUNDING MASONRY AND OTHER SURFACES.
1. COVER SILLS, LEDGES, AND PROJECTIONS TO PROTECT FROM MORTAR DROPPINGS.
  2. KEEP WALL AREA WET BELOW REBUILDING AND POINTING WORK TO DISCOURAGE FLOW OF SURROUNDING MASONRY WATER INTO REPAIR AREAS.
  3. IMMEDIATELY REMOVE MORTAR IN CONTACT WITH EXPOSED MASONRY AND OTHER SURFACES.
  4. IMMEDIATELY CLEAN ALL SURFACES AFFECTED BY THE POINTING WORK.
- 3.2. BRICK REMOVAL AND REPLACEMENT
- A. CAREFULLY REMOVE BY HAND, AT LOCATIONS INDICATED, BRICKS THAT ARE DAMAGED, SPALLED, OR DETERIORATED OR ARE TO BE REUSED/SALVAGED. CUT OUT FULL THICKNESS OF BRICK TO JOINT AND IN A MANNER TO PERMIT REPLACEMENT WITH FULL-SIZE UNITS WITHOUT DAMAGING SURROUNDING MASONRY.
1. WHEN REMOVING SINGLE BRICKS, REMOVE MATERIAL FROM CENTER OF BRICK AND CLEAN MASONRY SURFACE.
  2. SUPPORT AND PROTECT REMAINING MASONRY THAT SURROUNDS REMOVAL AREA. MAINTAIN FLASHING, REINFORCEMENT, LINTELS, AND ADJOINING CONSTRUCTION IN AN UNHARMED CONDITION.
  3. NOTIFY ARCHITECT OF UNFORESEEN DETRIMENTAL CONDITIONS INCLUDING VOIDS, CRACKS, BULGES, AND LOOSE UNITS IN EXISTING MASONRY BACKUP, ROTTED WOOD, RUSTED METAL, AND OTHER DETRIMENTAL CONDITIONS.
  4. REMOVE IN AN UNHARMED CONDITION AS MANY WHOLE BRICKS AS POSSIBLE.
  1. REMOVE MORTAR, LOOSE PARTICLES, AND SOIL FROM BRICK BY CLEANING WITH HAND CHISELS, BRUSHES, AND WATER.
  2. REMOVE SEALANTS AND OTHER GLUES TO BRICK WITH UTILITY KNIFE AND CLEANING WITH SOLVENTS.
  3. STORE BRICK FOR REUSE. STORE OFF GROUND, ON SKIDS, AND PROTECTED FROM WEATHER.
  4. DELIVER CLEANED BRICK NOT REQUIRED FOR REUSE TO OWNER UNLESS OTHERWISE INDICATED.
- C. CLEAN REMAINING BRICK AT EDGES OF REMOVAL AREAS BY REMOVING MORTAR, DUST, AND LOOSE PARTICLES IN PREPARATION FOR REPLACEMENT.
- F. REPLACE REMOVED DAMAGED BRICK WITH OTHER REMOVED BRICK AND SALVAGED BRICK IN GOOD QUALITY, WHEN POSSIBLE, OR WITH NEW BRICK MATCHING EXISTING BRICK IN COLOR, SIZE, AND SHAPE. IF NOT AVAILABLE, BRICKS CAN BE CUT TO MATCH EXISTING.
- G. INSTALL NEW AND SALVAGED BRICK TO REPLACE REMOVED BRICK. FIT REPLACEMENT UNITS TO BONDING AND COURSE/PATTERN OF EXISTING BRICK. IF CUTTING IS REQUIRED, USE A MOTOR-DRIVEN SAW DESIGNED TO CUT MASONRY WITH CLEAN, SHARP, UNCHIPPED EDGES.
1. MAINTAIN JOINT WIDTH FOR REPLACEMENT UNITS TO MATCH EXISTING JOINTS.
  2. USE SETTING BUTTONS OR SHIMS TO SET UNITS ACCURATELY SPACED WITH UNIFORM JOINTS.
- H. LAY REPLACEMENT BRICK WITH COMPLETELY FILLED BED, HEAD, AND COLLAR JOINTS. BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. WET BOTH REPLACEMENT AND SURROUNDING BRICKS THAT HAVE ASTM C 67 INITIAL RATES OF ABSORPTION (SECTION) OF MORE THAN 30 G/30 SQ. IN. PER MIN. USE WETTING METHODS THAT ENSURE THAT UNITS ARE NEARLY SATURATED BUT SURFACE IS DRY WHEN LAID.
1. SOIL EXPOSED MORTAR JOINTS IN REPAIRED AREAS TO MATCH JOINTS OF SURROUNDING EXISTING BRICKWORK.
  2. RAKE OUT MORTAR USED FOR LAYING BRICK BEFORE MORTAR SETS AND POINT NEW MORTAR JOINTS IN REPAIRED AREA TO COMPLY WITH REQUIREMENTS FOR REPOINTING EXISTING MASONRY, AND AT SAME TIME AS REPOINTING OF SURROUNDING AREA.
  3. INSTALL NEW BRICK SUFFICIENTLY HARD TO SUPPORT UNITS, REMOVE SHIMS AND OTHER DEVICES INTERFERING WITH POINTING OF JOINTS.
- I. INSTALL NEW WEEP VENTS AT HEAD JOINTS OF BRICK 24" ON CENTER MAX. AT FLASHING JOINTS. PROVIDE NATURAL DRAINAGE TO EXTERIOR.
- J. LAY REPLACEMENT BRICK WITH COMPLETELY FILLED BED, HEAD, AND COLLAR JOINTS. BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. WET CLAY BRICKS THAT HAVE ASTM C 67 INITIAL RATES OF ABSORPTION (SECTION) OF MORE THAN 30 G PER 30 SQ. IN. PER MIN. (20 G PER 194 SQ. CM PER MIN.) USE WETTING METHODS THAT ENSURE UNITS ARE NEARLY SATURATED BUT SURFACE DRY WHEN LAID. MAINTAIN JOINT WIDTH FOR REPLACEMENT UNITS TO MATCH EXISTING UNITS.
1. TOOL EXPOSED MORTAR JOINTS IN REPAIRED AREAS TO MATCH JOINTS OF SURROUNDING EXISTING BRICKWORK.
  2. RAKE OUT MORTAR USED FOR LAYING BRICK BEFORE MORTAR SETS AND POINT NEW MORTAR JOINTS IN REPAIRED AREA TO COMPLY WITH REQUIREMENTS FOR REPOINTING EXISTING MASONRY.
- 3.3. REPOINTING MASONRY
- A. RAKE OUT REPOINT JOINTS TO THE FOLLOWING EXTENT:
1. JOINTS IN AREAS INDICATED
  2. JOINTS INDICATED AS SEALANT-FILLED JOINTS.
- B. RAKE OUT JOINTS AS FOLLOWS, ACCORDING TO PROCEDURES DEMONSTRATED IN APPROVED MOCKUP.
1. REMOVE MORTAR FROM JOINTS TO DEPTH OF 2 TIMES JOINT WIDTH, BUT NOT LESS THAN 3/4 INCH OR NOT LESS THAN THAT REQUIRED TO EXPOSE SOUND MASONRY.
  2. REMOVE MORTAR FROM MASONRY SURFACES WITHIN RAKED-OUT JOINTS TO PROVIDE REVEALS WITH SQUARE BACKS AND TO EXPOSE MASONRY FOR CONTACT WITH POINTING MORTAR. BRUSH, VACUUM, OR FLUSH JOINTS TO REMOVE DIRT AND LOOSE DEBRIS.
  3. DO NOT SPALL EDGES OF MASONRY UNITS OR WIDEN JOINTS. REPLACE OR PATCH DAMAGED MASONRY UNITS AS DIRECTED BY ARCHITECT.

- a. USE OF POWER-OPERATED GRINDERS CONTINGENT ON ARCHITECT'S WRITTEN APPROVAL, BASED ON SUBMISSION BY CONTRACTOR OF SATISFACTORY QUALITY-CONTROL PROGRAM AND DEMONSTRATED ABILITY OF OPERATORS TO USE TOOLS WITHOUT DAMAGING MASONRY. QUALITY-CONTROL PROGRAM TO INCLUDE REFERENCE TO TREATMENT OF SUBSTRATE JOINTS AND CRACKS, FLASHINGS, DECK PENETRATIONS, AND OTHER TERMINATION CONDITIONS THAT ARE NOT INCLUDED IN MANUFACTURER'S PRODUCT DATA.
- C. NOTIFY ARCHITECT OF UNFORESEEN DETRIMENTAL CONDITIONS INCLUDING VOIDS IN MORTAR JOINTS, CRACKS, LOOSE MASONRY UNITS, ROTTED WOOD, RUSTED METAL, AND OTHER DETRIMENTAL CONDITIONS.
- D. POINTING WITH MORTAR:
1. RINSE JOINT SURFACES WITH WATER TO REMOVE DUST AND MORTAR PARTICLES. TIME RINSING AND CLEANING SO, AT TIME OF POINTING, JOINT SURFACES ARE DAMP AND FREE OF STANDING WATER. IF RINSE WATER DRIES, DAMPEN JOINT SURFACES BEFORE POINTING.
  2. APPLY POINTING MORTAR FIRST TO AREAS WHERE EXISTING MORTAR WAS REMOVED TO DEPTHS GREATER THAN 1/4 INCH. IN LAYERS NOT GREATER THAN 1/4 INCH UNTIL A UNIFORM DEPTH IS FORMED. FULLY COMPACT EACH LAYER THOROUGHLY AND ALLOW IT TO BECOME THUMBPRINT HARD BEFORE APPLYING NEXT LAYER.
  3. AFTER LOW AREAS HAVE BEEN FILLED TO SAME DEPTH AS REMAINING JOINTS, POINT ALL JOINTS BY PLACING MORTAR IN LAYERS NOT GREATER THAN 1/4 INCH. FULLY COMPACT EACH LAYER AND ALLOW IT TO BECOME THUMBPRINT HARD BEFORE APPLYING NEXT LAYER, WHERE EXISTING MASONRY UNITS HAVE VORN OR ROUNDED EDGES, SLIGHTLY RECESS FINISHED MORTAR SURFACE BELOW FACE OF MASONRY TO AVOID WIDENED JOINT FACES. TAKE CARE NOT TO SPREAD MORTAR BEYOND JOINT EDGES ONTO EXPOSED MASONRY SURFACES OR TO FEATHERED THE MORTAR.
  4. WHEN MORTAR IS THUMBPRINT HARD, TOOL JOINTS TO MATCH ORIGINAL APPEARANCE OF JOINTS AS DEMONSTRATED IN APPROVED MOCKUP. REMOVE EXCESS MORTAR FROM JOINTS BY BRUSHING.
  5. CURE MORTAR BY MAINTAINING IN THOROUGHLY DAMP CONDITION FOR AT LEAST 72 CONSECUTIVE HOURS INCLUDING WEEKENDS AND HOLIDAYS.
  6. ACCEPTABLE CURING METHOD: COVER WITH WET BURLAP AND PLASTIC SHEETING, PERIODIC HAND MISTING, AND PERIODIC MIST SPRAYING USING SYSTEM OF PIPES, MIST HEADS, AND TIMERS.
- b. WEATHER LIMITATIONS: ENSURE THAT POINTING MORTAR IS DAMP THROUGHOUT ITS DEPTH WITHOUT ERODING SURFACE MORTAR.
6. HAIRLINE CRACKING WITHIN THE MORTAR OR MORTAR SEPARATION AT EDGE OF A PATCH IS UNACCEPTABLE. COMPLETELY REMOVE SUCH MORTAR AND REPOINT TO THE SAME DEPTH AS THE EXISTING MORTAR.
- E. WHERE REPOINTING WORK PRECEDES CLEANING OF EXISTING MASONRY, ALLOW MORTAR TO HARDEN AT LEAST 30 DAYS BEFORE BEGINNING CLEANING WORK.
- 3.4. PATCHING
- A. PATCH THE FOLLOWING CAST STONE UNITS UNLESS ANOTHER TYPE OF REPLACEMENT OR REPAIR IS INDICATED:
1. UNITS INDICATED TO BE PATCHED.
  2. REMOVE AND REPLACE EXISTING PATCHES UNLESS OTHERWISE INDICATED OR APPROVED BY ARCHITECT.
  3. REMOVE DETERIORATED MATERIAL AND REMOVE ADJACENT MATERIAL THAT HAS BEGUN TO DETRIERATE. CAREFULLY REMOVE ADDITIONAL MATERIAL SO PATCH WILL NOT HAVE FEATHERED EDGES BUT WILL HAVE SQUARE OR SLIGHTLY UNDERCUT EDGES ON AREA TO BE PATCHED AND WILL BE AT LEAST 1/4 INCH THICK, BUT NOT LESS THAN RECOMMENDED BY MANUFACTURER OF PATCHING COMPOUND.
  4. MASK ADJACENT MORTAR JOINT OR RAKE OUT FOR REPOINTING IF PATCH WILL EXTEND TO EDGE OF STONE UNIT.
  5. FORMULATE PATCHING COMPOUND IN COLORS, TEXTURES, AND GRAIN TO MATCH EXISTED PATCH. COMBINE ONE OR MORE BATCHES OF PATCHING COMPOUND, AS NEEDED, TO PRODUCE EXACT MATCH.
  6. MIX PATCHING COMPOUND WITH SLURRY COAT OF PATCHING COMPOUND ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
  7. PLACE PATCHING COMPOUND IN LAYERS AS RECOMMENDED BY PATCHING COMPOUND MANUFACTURER, BUT NOT LESS THAN 1/4 INCH OR MORE THAN 2 INCHES THICK. ROUGHEN SURFACE OF PATCHING COMPOUND WITH KEY FOR NEXT LAYER.
  1. TROWEL, SCRAPE, OR CARVE SURFACE OF PATCH TO MATCH TEXTURE AND SURROUNDING SURFACE PLANE OR CONTOUR OF THE STONE. SHAPE AND FINISH SURFACE OF PATCH TO MATCH EXISTING SURFACE. IF PATCH IS TO BE PATCHED TO A DEPTH OF 1/2 INCH OR GREATER, USE AT LEAST TWO COATS OF PATCHING COMPOUND. AFTER CURING, AS DETERMINED BY TESTING, TO BEST MATCH EXISTING STONE.
  2. BUILD PATCH UP 1/4 INCH ABOVE SURROUNDING STONE AND CARVE SURFACE TO CONCENTRATE AND TO BE RECOMMENDED BY CHEMICAL CLEANER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  3. KEEP EACH LAYER DAMP FOR 72 HOURS OR UNTIL PATCHING COMPOUND HAS SET.
  1. REMOVE AND REPLACE PATCHES WITH HAIRLINE CRACKS OR THAT SHOW SEPARATION FROM BACK AT EDGES, AND THOSE THAT DO NOT MATCH ADJOINING STONE IN COLOR OR TEXTURE.
- 3.5. CLEANING MASONRY, GENERAL
- A. PROCEED WITH CLEANING IN AN ORDERLY MANNER, WORK FROM TOP TO BOTTOM OF EACH SCAFFOLD WIDTH AND FROM ONE END OF EACH ELEVATION TO THE OTHER. WORK FROM BOTTOM TO TOP OF THE BUILDING FOR EACH SCAFFOLD DROP.
- B. **CLEAN/RESTORE ALL MASONRY SURFACES OF THE GARAGE BOTH UPPER AND LOWER LEVEL TO THEIR ORIGINAL CONSTRUCTION CONDITIONS.**
- C. USE ONLY THOSE CLEANING METHODS INDICATED FOR EACH MASONRY MATERIAL AND LOCATION.
1. SPRAY EQUIPMENT THAT PROVIDES CONTROLLED APPLICATION AT VOLUME AND PRESSURE INDICATED, MEASURED AT SPRAY TIP, ADJUST PRESSURE AND VOLUME TO ENSURE THAT CLEANING METHODS DO NOT DAMAGE MASONRY.
- a. EQUIP UNITS WITH PRESSURE GAGES.
- D. PERFORM EACH CLEANING METHOD INDICATED IN A MANNER THAT RESULTS IN UNIFORM COVERAGE OF ALL SURFACES, INCLUDING CORNERS, MOLDINGS, AND INTERSTICES, AND THAT PRODUCES AN EVEN EFFECT WITHOUT STREAKING OR DAMAGING MASONRY SURFACES.
- E. WATER APPLICATION METHODS: WHERE WATER APPLICATION METHODS ARE INDICATED, COMPLY WITH THE FOLLOWING:
1. SPRAY EQUIPMENT: SPRAY APPLY WATER TO MASONRY SURFACES TO COMPLY WITH REQUIREMENTS INDICATED FOR LOCATION, PURPOSE, WATER TEMPERATURE, PRESSURE, VOLUME, AND EQUIPMENT. UNLESS OTHERWISE INDICATED, HOLD SPRAY NOZZLE AT LEAST 18 INCHES FROM SURFACE OF MASONRY. SPRAY FROM 18 INCHES FROM SIDE TO SIDE IN OVERLAPPING BANDS TO PRODUCE UNIFORM COVERAGE AND AN EVEN EFFECT.
  2. FRESH OFF CHEMICAL RESIDUE AND SOIL BY WORKING UPWARD FROM BOTTOM TO TOP OF EACH TREATED AREA AT EACH STATION OF SCAFFOLD SETTING.
  3. PROTECT ALL NON-MASONRY COMPONENTS WITHIN THE WALL SYSTEM AND AT ADJACENT SYSTEMS FROM DAMAGE AND EXPOSURE TO CLEANING MATERIALS
- 3.6. A. DETERGENT CLEANING: CLEAN BRICK MASONRY WITH A DETERGENT SOLUTION APPLIED AS FOLLOWS:
1. WET MASONRY WITH COLD WATER APPLIED BY LOW-PRESSURE SPRAY.
  2. SCRUB MASONRY WITH DETERGENT SOLUTION USING MEDIUM-SOFT BRUSHES UNTIL SOIL IS THOROUGHLY DISLOGGED AND CAN BE REMOVED BY RINSING. USE SMALL BRUSHES TO REACH CRACKS AND REPAIRS.
  3. RINSE WITH COLD WATER TO REMOVE DETERGENT SOLUTION AND SOIL.
  4. REPEAT CLEANING PROCEDURE ABOVE WHERE REQUIRED TO PRODUCE THE CLEANING EFFECT ESTABLISHED BY MOCKUP.
- 3.7. CLEAN MASONRY WORK IS COMPLETED AND CLEANING:
- A. AFTER MORTAR HAS FULLY HARDENED, THOROUGHLY CLEAN EXPOSED MASONRY SURFACES OF EXCESS MORTAR AND FOREIGN MATTER: USE STIFF-NYLON OR -FIBER BRUSHES TO CLEAN SURFACES. CLEAN REPAIR AREAS AT A LOW PRESSURE.
- B. DO NOT USE METAL SCRAPERS OR BRUSHES.
- C. DO NOT USE ACIDIC OR ALKALINE CLEANERS.

SECTION 071800 - TRAFFIC COATINGS

PART 1 - GENERAL

- 1.1. SUMMARY
- A. SECTION INCLUDES TRAFFIC COATINGS FOR THE FOLLOWING APPLICATION



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SECTION 071800 - TRAFFIC COATINGS (CONTINUED)

- 2.3. TRAFFIC COATING
- A. TRAFFIC COATING: MANUFACTURER'S STANDARD, TRAFFIC-BEARING, SEAMLESS, HIGH-SOLIDS-CONTENT, COLD LIQUID-APPLIED, ELASTOMERIC, WATER-RESISTANT MEMBRANE SYSTEM WITH INTEGRAL WEARING SURFACE FOR VEHICULAR TRAFFIC SERVICE CONDITION, ACCORDING TO ASTM C057/C057M.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
- a. VEHICULAR URETHANE TRAFFIC COATING SYSTEM
- 1) BASIS OF DESIGN:
- a) SIKALACORPORATION: SIKALASTIC 720/745 TRAFFIC SYSTEM
- 2) OTHER ACCEPTABLE MANUFACTURERS:
- a) MASTER BUILDER SOLUTIONS CONSTRUCTION SYSTEMS: MASTERSEAL VEHICULAR TRAFFIC 2575
- b) TREMCO INCORPORATED, AN RPM COMPANY;
2. APPLIED TOTAL DRY FILM THICKNESS EXCLUSIVE OF AGGREGATE:
- a. HEAVY VEHICULAR TRAFFIC WITH 10-YEAR WARRANTY: 70 MILS MINIMUM
- B. PRIMER: LIQUID PRIMER AS RECOMMENDED IN WRITING FOR SUBSTRATE AND CONDITIONS BY TRAFFIC-COATING MANUFACTURER.
1. MATERIAL: POLYURETHANE
2. BASIS OF DESIGN:
- a. SIKALASTIC PRIMER FAST CURING 1C PU PRIMER.
- C. PREPARATORY AND BASE COATS: POLYURETHANE
1. BASIS OF DESIGN:
- a. SIKALASTIC 720 BASE TWO-COMPONENT AROMATIC POLYURETHANE BASE COAT.
2. THICKNESSES: MINIMUM 25 WET MILS THICKNESS AND AS RECOMMENDED IN WRITING BY MANUFACTURER FOR SUBSTRATE AND SERVICE CONDITIONS INDICATED.
- D. INTERMEDIATE COAT: POLYURETHANE
1. BASIS OF DESIGN:
- a. SIKALASTIC 745 AL TOP TWO-COMPONENT ALIPHATIC POLYURETHANE TOPCOAT.
2. THICKNESSES: TWO COATS, MINIMUM 32 TOTAL WET MILS THICKNESS AND AS RECOMMENDED IN WRITING BY MANUFACTURER FOR SUBSTRATE AND SERVICE CONDITIONS INDICATED. MEASURED EXCLUDING AGGREGATE.
3. AGGREGATE CONTENT: TO REFUSE, AND AS RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER FOR SUBSTRATE AND SERVICE CONDITIONS INDICATED
- E. TOPCOAT: POLYURETHANE.
1. BASIS OF DESIGN:
- a. SIKALASTIC 745 AL TOP TWO-COMPONENT ALIPHATIC POLYURETHANE TOPCOAT.
2. THICKNESSES: MINIMUM 18 WET MILS THICKNESS AND AS RECOMMENDED IN WRITING BY MANUFACTURER FOR SUBSTRATE AND SERVICE CONDITIONS INDICATED.
3. COLOR: AS SELECTED BY TCM AND ARCHITECT FROM MANUFACTURER'S FULL RANGE. AGGREGATE: UNIFORMLY GRADED, WASHED SILICA SAND OF PARTICLE SIZES, SHAPE, AND MINIMUM HARDNESS RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER.
1. STANDARD AGGREGATE: CLEAN, ROUNDED, OVEN DRIED QUARTZ SAND WITH A MINIMUM GRADATION OF 16-30 MESH AND A MINIMUM HARDNESS OF 6.5 PER THE MOHS SCALE. AGGREGATE SHALL BE SUPPLIED IN PRE-PACKAGED BAGS AND FREE OF METALLIC OR OTHER IMPURITIES.
2. DECORATIVE AGGREGATE: UV-STABLE, CERAMIC-COATED QUARTZ AGGREGATE IN A STANDARD OR CUSTOM COLOR BLEND, INTENDED FOR A FULL BROADCAST APPLICATION WHERE A CLEAR SEALCOAT WILL BE APPLIED. AGGREGATE SHALL BE SUPPLIED IN PRE-BLENDED AND PACKAGED BAGS.
- 2.4. ACCESSORY MATERIALS
- A. GENERAL: ACCESSORY MATERIALS AS DESCRIBED IN MANUFACTURERS' WRITTEN INSTALLATION INSTRUCTIONS, RECOMMENDED TO PRODUCE COMPLETE TRAFFIC COATING SYSTEM MEETING PERFORMANCE, REQUIREMENTS, AND COMPATIBLE WITH TRAFFIC COATING MATERIAL AND ADJACENT MATERIALS.
- B. JOINT SEALANTS: TRAFFIC COATING MANUFACTURER'S SINGLE-COMPONENT, NON-SAGGING URETHANE JOINT SEALANT: ASTM C920, TYPE NS, CLASS 50
1. BASIS OF DESIGN:
- a. SIKAFLEX 2C NS TG
- 1) JOINT DESIGNATION (EJS-1)
- C. ADHESIVE: CONTACT ADHESIVE RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER.
- D. FABRIC REINFORCEMENT: MANUFACTURER'S FABRIC REINFORCEMENT BRIDGING JOINTS INCLUDING ALL PRECAST CONCRETE TEES AND JOINT AT EDUCATION BUILDING, AND ANY OTHER LOCATIONS AS INDICATED WITHIN DRAWINGS.
1. BASIS OF DESIGN:
- a. SIKALASTIC FLEXITAPE HEAVY WOVEN NYLON REINFORCEMENT.
- E. EXPANSION JOINT SYSTEM: TWO HORIZONTAL PRECOMPRESSED FOAM SEALANTS PREEMBEDDED IN PARALLEL ADJACENT TO A HEAVY-DUTY EXTRUDED ALUMINUM SPLINE
1. BASIS OF DESIGN: SJS-SEISMIC JOINT SYSTEM BY EMBASELISKA
- a. COVER PLATE MATERIAL: STAINLESS STEEL
2. REFER TO SPECIFICATION 079200
- 2.5. EXTERIOR WALL COATING
- A. MATERIAL COMPATIBILITY: PROVIDE PRIMERS, ELASTOMERIC FINISH COAT MATERIALS, AND RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND THE SUBSTRATES INDICATED UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY MANUFACTURER BASED ON TESTING AND FIELD PERFORMANCE.
- B. COLORS AND TEXTURES: PROVIDE COLOR AND TEXTURE SELECTIONS MADE BY THE ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLORS FOR EXTERIOR WALL COATING SYSTEMS.
1. UPPER LEVEL DECK, SUCH AS PERIMETER PARAPET WALLS, PIERS, AND EDUCATION BUILDING WALLS ABOVE THE DECK AS INDICATED WITHIN THE DRAWINGS.
- C. EXTERIOR WALL COATING: FOR USE AT ALL EXTERIOR WALL SUBSTRATES UPPER LEVEL DECK, SUCH AS PERIMETER PARAPET WALLS, PIERS, AND EDUCATION BUILDING WALLS ABOVE THE DECK AS INDICATED WITHIN THE DRAWINGS.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
- a. EXTERIOR WALL COATING SYSTEM
- 1) BASIS OF DESIGN:
- a) SIKALACORPORATION: SIKAGARD-670 W
- 2) OTHER ACCEPTABLE MANUFACTURERS:
- a) MASTER BUILDER SOLUTIONS CONSTRUCTION SYSTEMS: MASTERSEAL VEHICULAR TRAFFIC 2575
- b) TREMCO INCORPORATED, AN RPM COMPANY;
2. COLOR AND FINISH: TO BE SELECTED BY OWNER AND ARCHITECT.
3. WALL COATING SYSTEM IS INCLUSIVE OF ALL ASSOCIATED COMPONENTS (I.E. CLEANERS, PRIMERS, FILLERS, SEALANTS, REINFORCEMENT, ETC), BY MANUFACTURER FOR A COMPLETE SYSTEM
4. ODORS: WHEREVER A SYSTEM COMPONENT IS AVAILABLE IN A NOL-ODOR FORMULATION THE CONTRACTOR IS TO PROVIDE, AT NO ADDITIONAL COST TO THE OWNER, THE COMPONENTS IN THE LOWEST FORM OR odor CONFIGURATION THAT MAY BE INCORPORATED WITHIN THE SYSTEM WHILE STILL MEETING THE PERFORMANCE REQUIREMENTS, INCLUDING VOC AND ENVIRONMENTAL REQUIREMENTS HEREIN.
- PART 3 - EXECUTION
- 3.1. EXAMINATION
- A. EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR MAXIMUM MOISTURE CONTENT, SURFACE SMOOTHNESS, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF TRAFFIC-COATING WORK.
- B. SURFACE CONDITION: BEFORE APPLYING TRAFFIC COATING MATERIALS AND SYSTEM ACCESSORIES, EXAMINE SUBSTRATE AND CONDITIONS TO ENSURE SUBSTRATES ARE FULLY CURED AND FREE FROM HIGH SPOTS, DEPRESSIONS, LOOSE AND FOREIGN PARTICLES AND OTHER DEFECTS TO ADHESION, AND CONDITIONS COMPLY WITH MANUFACTURERS' WRITTEN RECOMMENDATIONS.
1. VERIFY CONCRETE SURFACES ARE LAITANCE DRY, HAVE CURED FOR TIME PERIOD RECOMMENDED BY TRAFFIC-COATING MANUFACTURER, AND ARE FREE FROM RELEASE AGENTS, CURING AGENTS, LAITANCE, AND OTHER CONTAMINANTS.
2. TEST SURFACES FOLLOWING CLEANING AND ABRASION SPECIFIED BELOW.
- a. TEST FOR MOISTURE ACCORDING TO ASTM D4263.
- b. TEST FOR MOISTURE CONTENT BY METHOD RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER.
- 1) <4% MOISTURE CONTENT BY WEIGHT, MEASURED WITH TRAMEX CONCRETE MOISTURE ENCOUNTER METER
- c. TEST FOR TRAFFIC COATING ADHESION PER MANUFACTURERS RECOMMENDED METHOD.
- d. NOTIFY ARCHITECT IN WRITING OF UNSATISFACTORY CONDITIONS.
- C. PREPARE WRITTEN REPORT, ENDORSED BY INSTALLER, LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF TRAFFIC-COATING WORK.
- D. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
1. BEGIN COATING APPLICATION ONLY AFTER SUBSTRATE CONSTRUCTION AND PENETRATING WORK HAVE BEEN COMPLETED.
2. BEGIN COATING APPLICATION ONLY AFTER MINIMUM CONCRETE-CURING AND -DRYING PERIOD RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER HAS PASSED AND AFTER SUBSTRATES ARE DRY.
3. APPLICATION OF COATING INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.
- 3.2. PREPARATION
- A. CLEAN AND PREPARE SUBSTRATES ACCORDING TO ASTM C1127 AND MANUFACTURERS' WRITTEN INSTRUCTIONS TO PRODUCE CLEAN, DUST-FREE, DRY SUBSTRATE FOR TRAFFIC-COATING APPLICATION. REMOVE PROJECTIONS, FILL VOIDS, AND SEAL JOINTS IF ANY, AS RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER.
- B. PRIMING: UNLESS MANUFACTURER RECOMMENDS IN WRITING AGAINST PRIMER, PRIME SUBSTRATES ACCORDING TO MANUFACTURERS' WRITTEN INSTRUCTIONS.
1. LIMIT PRIMING TO AREAS THAT WILL BE COVERED BY TRAFFIC-COATING MATERIAL ON SAME DAY. REPRIME AREAS EXPOSED FOR MORE TIME THAN RECOMMENDED BY MANUFACTURER.

- C. SCHEDULE PREPARATION WORK SO DUST AND OTHER CONTAMINANTS FROM PROCESS DO NOT FALL ON WET, NEWLY COATED SURFACES.
- D. MASK ADJOINING SURFACES NOT RECEIVING TRAFFIC COATINGS TO PREVENT OVERSPRAY, SPILLAGE, LEAKING, AND MIGRATION OF COATINGS. PREVENT TRAFFIC-COATING MATERIALS FROM ENTERING DECK SUBSTRATE PENETRATIONS AND CLOGGING WEEP HOLES AND CHANNELS ACCORDING TO ASTM C057/C057M.
- E. CONCRETE SUBSTRATES: MECHANICALLY ABRASE SURFACE TO A UNIFORM PROFILE ACCEPTABLE TO MANUFACTURER, ACCORDING TO ASTM D4259. DO NOT ACID ETCH.
1. REMOVE GREASE, OIL, PAINTS, AND OTHER PENETRATING CONTAMINANTS FROM CONCRETE.
2. REMOVE CONCRETE FINIS, RIDGES, AND OTHER PROJECTIONS.
3. REMOVE LAITANCE, GLAZE, EFFLORESCENCE, CURING COMPOUNDS, CONCRETE HARDENERS, FORM-RELEASE AGENTS, AND OTHER INCOMPATIBLE MATERIALS THAT MIGHT AFFECT COATING ADHESION.
4. REMOVE REMAINING LOOSE MATERIAL TO PROVIDE A SOUND SURFACE, AND CLEAN SURFACES ACCORDING TO ASTM D4258.
5. CONCRETE SHALL BE CLEANED AND PREPARED TO ACHIEVE A LAITANCE AND CONTAMINANT FREE, OPEN TEXTURED SURFACE BY BLAST CLEANING OR EQUIVALENT MECHANICAL BRUSH (CSP 3-4 PER ICCI GUIDELINES).
- 3.3. TERMINATIONS AND PENETRATIONS
- A. PREPARE VERTICAL AND HORIZONTAL SURFACES AT TERMINATIONS AND PENETRATIONS THROUGH TRAFFIC COATINGS AND AT EXPANSION JOINTS, DRAINS, AND SLEEVES ACCORDING TO ASTM C1127 AND MANUFACTURERS' WRITTEN INSTRUCTIONS.
- B. PROVIDE SEALANT CAVITIES AT PENETRATIONS AND AT REINFORCED AND NONREINFORCED, DECK-TO-WALL BUTT JOINTS.
- C. TERMINATE EDGES OF DECK-TO-DECK EXPANSION JOINTS WITH PREPARATORY BASE-COAT STRIP.
- 3.4. JOINT AND CRACK TREATMENT
- A. PREPARE, TREAT, ROLL, AND FILL JOINTS AND CRACKS IN SUBSTRATES ACCORDING TO ASTM C1127 AND MANUFACTURERS' WRITTEN RECOMMENDATIONS, BEFORE COATING SURFACES. REMOVE DUST AND DIRT FROM JOINTS AND CRACKS ACCORDING TO ASTM D4259.
- B. JOINT SEALANT INSTALLATION: COMPLY WITH ASTM C1193 AND MANUFACTURERS' WRITTEN INSTRUCTIONS. ALLOW JOINT SEALANTS TO CURE ADEQUATELY BEFORE COATING WITH TRAFFIC COATING.
- C. APPLY REINFORCING STRIP IN TRAFFIC-COATING SYSTEM WHERE RECOMMENDED IN WRITING BY TRAFFIC-COATING MANUFACTURER.
- D. FABRIC REINFORCEMENT: PROVIDE A 3" OR 6" WIDE FABRIC REINFORCING STRIP EMBEDDED WITHIN THE BASE COAT. REINFORCING MESH WIDTH SHALL BE CHOSEN SUCH THAT A MINIMUM OF 1" LAP IS EMBEDDED (15).
- 3.5. INSTALLATION OF TRAFFIC COATING
- A. PRIMER: PRIME METAL SURFACES, POROUS SURFACES (WHEN REQUIRED), AND PRECEDING COATS LEFT UNCOATED FOR MORE THAN 24 HOURS OR THAT HAVE LOST SURFACE TACK, WITH MANUFACTURER'S RECOMMENDED PRIMER, ALLOW TO CURE BEFORE PROCEEDING.
- B. APPLY TRAFFIC COATINGS ACCORDING TO ASTM C1127 AND MANUFACTURERS' WRITTEN INSTRUCTIONS.
- C. APPLY COATS OF SPECIFIED COMPOSITIONS FOR EACH TYPE OF TRAFFIC COATING AT LOCATIONS AS INDICATED ON DRAWINGS.
- D. START TRAFFIC-COATING APPLICATION IN PRESENCE OF MANUFACTURERS' TECHNICAL REPRESENTATIVE.
- E. VERIFY THAT WET-FILM THICKNESS OF EACH COAT COMPLIES WITH REQUIREMENTS EVERY 100 SQ. FT.
- F. UNIFORMLY BROADCAST AND EMBED AGGREGATE IN EACH COAT INDICATED TO RECEIVE AGGREGATE ACCORDING TO MANUFACTURERS' WRITTEN INSTRUCTIONS. AFTER COAT DRIES, SWEEP AWAY EXCESS AGGREGATE.
- G. APPLY TRAFFIC COATINGS TO PREPARED WALL TERMINATIONS AND VERTICAL SURFACES TO HEIGHT INDICATED; OMIT AGGREGATE ON VERTICAL SURFACES.
- H. CURE TRAFFIC COATINGS, PREVENT CONTAMINATION AND DAMAGE DURING COATING APPLICATION AND CURING.
- 3.6. INSTALLATION OF PAVEMENT MARKINGS
- A. DO NOT APPLY PAVEMENT-MARKING PAINT FOR STRIPING AND OTHER MARKINGS UNTIL LAYOUT, COLORS, AND PLACEMENT HAVE BEEN VERIFIED WITH ARCHITECT AND TRAFFIC COATING HAS CURED.
- B. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
- C. APPLY PAVEMENT-MARKING PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE MARKINGS OF DIMENSIONS INDICATED WITH UNIFORM STRAIGHT EDGES. APPLY AT MANUFACTURERS' RECOMMENDED RATE FOR A MINIMUM WET FILM THICKNESS OF 1.6 MILS (0.4 MM).
1. APPLY GRAPHIC SYMBOLS AND LETTERING WITH PAINT-RESISTANT, DIE-CUT STENCILS, FIRMLY SECURED TO SURFACE, MASK AN EXTENDED AREA BEYOND EDGES OF EACH STENCIL TO PREVENT PAINT APPLICATION BEYOND STENCIL. APPLY PAINT SO THAT IT CANNOT RUN BEHIND STENCIL.
- 3.7. FIELD QUALITY CONTROL
- A. INITIAL INSPECTION: ARRANGE FOR COATING SYSTEM MANUFACTURER'S TECHNICAL PERSONNEL TO INSPECT AT THE START OF THE INSTALLATION OF THE COATING SYSTEM AND SUBMIT A PROJECT SPECIFIC REPORT TO ARCHITECT WITHIN 72 HOURS OF VISIT.
1. NOTIFY ARCHITECT AND OWNER 48 HOURS IN ADVANCE OF DATE AND TIME OF INSPECTION.
- B. INTERIM INSPECTIONS: ARRANGE FOR COATING SYSTEM MANUFACTURERS' TECHNICAL PERSONNEL TO INSPECT THE INSTALLATION OF THE COATING SYSTEM WEEKLY WHILE WORK IS IN PROGRESS AND SUBMIT A PROJECT SPECIFIC REPORT TO ARCHITECT WITHIN 72 HOURS OF VISIT.
1. NOTIFY ARCHITECT AND OWNER 48 HOURS IN ADVANCE OF DATE AND TIME OF INSPECTION.
- C. FINAL INSPECTION: ARRANGE FOR COATING SYSTEM MANUFACTURERS' TECHNICAL PERSONNEL TO INSPECT COATING INSTALLATION ON COMPLETION AND SUBMIT A PROJECT SPECIFIC REPORT TO ARCHITECT WITHIN 72 HOURS OF VISIT.
1. NOTIFY ARCHITECT AND OWNER 48 HOURS IN ADVANCE OF DATE AND TIME OF INSPECTION.
- D. WATERPROOFING WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.
- E. REPAIR OR REMOVE AND REPLACE COMPONENTS OF THE COATING SYSTEM WHERE TEST RESULTS OR INSPECTIONS INDICATE THAT THEY DO NOT COMPLY WITH SPECIFIED REQUIREMENTS.
- F. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.
- G. THE CONTRACTOR SHALL UTILIZE WET FILM THICKNESS GAUGES THROUGHOUT THE COURSE OF THE PROJECT TO ENSURE COMPLIANCE WITH THE SPECIFIED MEMBRANE WET FILM THICKNESS AT BOTH HIGH AND LOW POINTS ON THE SUBSTRATE.
- H. UPON COMPLETION OF THE COATING MEMBRANE WORK, THE MANUFACTURERS' REPRESENTATIVE AND THE CONTRACTOR WILL CALCULATE THE COVERAGE RATE AND SUBSEQUENT DRY FILM THICKNESS OF THE APPLIED COATING MATERIAL TO ENSURE THAT THE MINIMAL REQUIREMENTS OF THIS TECHNICAL SPECIFICATION HAVE BEEN MET. IF ACTUAL DRY FILM THICKNESS NEEDS TO BE MEASURED, THEN THE DRY FILM THICKNESS WILL BE MEASURED WITH A TOOKEE GAGE.
- I. IF MINIMUM DRY FILM THICKNESS REQUIREMENTS HAVE NOT BEEN MET BY THE CONTRACTOR, THEN ADDITIONAL COATING MEMBRANE MATERIAL MUST BE APPLIED BY THE CONTRACTOR AT HIS COST TO FULFILL THE SPECIFICATION REQUIREMENTS. IF RESULTS SHOW MATERIALS DO NOT COMPLY WITH REQUIREMENTS, THE CONTRACTOR MAY BE DIRECTED TO STOP WORK, REMOVE NON-COMPLYING MATERIALS, RECOAT SURFACES PREVIOUSLY COATED SURFACES IF, ON RECOATING WITH SPECIFIED MATERIALS, THE 2 COATINGS ARE NOT COMPATIBLE.
- J. FAILURE TO COORDINATE AND SCHEDULE MANAGER'S INSPECTIONS AND PROVIDE THE ASSOCIATED INSPECTIONS REPORTS AS OUTLINED HEREIN SHALL BE CREDITED BACK TO OWNER, VIA A CREDIT CHANGE ORDER TO THE CONTRACTOR'S CONTRACT AT A COST OF \$1,000.00 PER AN INSPECTION/REPORT.
- 3.8. PROTECT TRAFFIC COATINGS FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.
- A. CLEAN SPILLAGE AND SOLING FROM ADJACENT CONSTRUCTION USING CLEANING AGENTS AND PROCEDURES RECOMMENDED BY MANUFACTURER OF AFFECTED CONSTRUCTION.

SECTION 076200 - SHEET METAL FLASHING AND TRIM

- PART 1 - GENERAL
- 1.1. RELATED DOCUMENTS
- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
- 1.2. SUMMARY
- A. SECTION INCLUDES:
1. FORMED THROUGH-WALL FLASHING AND ASSOCIATED WEEPS
- B. RELATED REQUIREMENTS
1. DIVISION 4 SECTION 049010 "MASONRY RESTORATION" FOR SHEET METAL FLASHING IN MASONRY
2. DIVISION 7 SECTION 079200 - "JOINT SEALANTS" FOR FIELD-APPLIED SHEET METAL FLASHING AND TRIM SEALANTS.
- 1.3. COORDINATION
- A. COORDINATE SHEET METAL FLASHING AND TRIM LAYOUT AND SEAMS WITH SIZES AND LOCATIONS OF PENETRATIONS TO BE FLASHED, AND JOINTS AND SEAMS IN ADJACENT MATERIALS.
- B. COORDINATE SHEET METAL FLASHING AND TRIM INSTALLATION WITH ADJOINING ROOFING AND WALL MATERIALS, JOINTS, AND SEAMS TO PROVIDE LEAKPROOF, SECURE, AND NONCORROSIVE INSTALLATION.

- 1.4. PREINSTALLATION MEETINGS
- A. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.
1. MEET WITH OWNER, ARCHITECT, INSTALLER, AND INSTALLERS WHOSE WORK INTERFACES WITH OR AFFECTS SHEET METAL FLASHING AND TRIM INCLUDING INSTALLERS OF AIR BARRIER MEMBRANE SYSTEMS AND JOINT SEALANTS.
2. REVIEW CONSTRUCTION SCHEDULE, VERIFY AVAILABILITY OF MATERIALS, INSTALLERS PERSONNEL, EQUIPMENT, AND FACILITIES NEEDED TO MAKE PROGRESS AND AVOID DELAYS.
3. REVIEW SPECIAL DETAILS AND CONDITIONS OF OTHER CONSTRUCTION THAT AFFECT SHEET METAL FLASHING AND TRIM.
4. REVIEW REQUIREMENTS FOR INSURANCE AND CERTIFICATES IF APPLICABLE.
5. REVIEW SHEET METAL FLASHING OBSERVATION AND REPAIR PROCEDURES AFTER FLASHING INSTALLATION.
- 1.5. ACTION SUBMITTALS
- A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT, INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES FOR EACH MANUFACTURED PRODUCT AND ACCESSORY.
- B. SHOP DRAWINGS (PROJECT SPECIFIC): SHOW LAYOUTS OF SHEET METAL FLASHING AND TRIM, INCLUDING PLANS AND ELEVATIONS, SHOP DRAWINGS FOR SHEET METAL FLASHING AND TRIM SHALL BE KEYS TO THE CONTRACT DOCUMENTS AND INCLUDE THE FOLLOWING:
1. INCLUDE PLANS, ELEVATIONS, SECTIONS, AND ATTACHMENT DETAILS.
2. FIELD VERIFIED DIMENSIONS OF EXISTING CONDITIONS AND CONFIGURATIONS.
3. DETAIL FABRICATION AND INSTALLATION LAYOUTS, EXPANSION-JOINT LOCATIONS, AND KEYS DETAILS, DISTINGUISH BETWEEN SHOP- AND FIELD-ASSEMBLED WORK.
4. INCLUDE IDENTIFICATION OF MATERIAL, THICKNESS, WEIGHT, AND FINISH FOR EACH TRIM AND LOCATION IN PROJECT.
5. INCLUDE DETAILS FOR FORMING, INCLUDING PROFILES, SHAPES, SEAMS, AND DIMENSIONS.
6. INCLUDE DETAILS FOR JOINING, SUPPORTING, AND SECURING, INCLUDING LAYOUT AND SPACING OF FASTENERS, CLEATS, CLIPS, AND OTHER ATTACHMENTS, INCLUDE PATTERN OF SEAMS.
7. INCLUDE DETAILS OF TERMINATION POINTS AND ASSEMBLIES.
8. INCLUDE DETAILS OF SPECIAL CONDITIONS.
9. INCLUDE DETAILS OF CONNECTIONS TO ADJOINING WORK.
10. DETAIL FORMED FLASHING AND TRIM SCALE AT SCALE OF NOT LESS THAN 6 INCHES PER 12 INCHES (15).
- C. SAMPLES FOR INITIAL SELECTION: FOR EACH TYPE OF SHEET METAL AND ACCESSORY INDICATED WITH FACTORY-APPLIED FINISHES.
- D. SAMPLES FOR VERIFICATION: FOR EACH TYPE OF EXPOSED FINISH.
1. SHEET METAL FLASHING: 12 INCHES (300 MM) LONG BY ACTUAL WIDTH OF UNIT, INCLUDING FINISHED SEAM AND IN REQUIRED PROFILE, INCLUDE FASTENERS, CLEATS, CLIPS, CLOSURES, AND OTHER ATTACHMENTS.
- 1.6. INFORMATIONAL SUBMITTALS
- A. QUALIFICATION DATA: FOR FABRICATOR.
- B. PRODUCT TEST REPORTS: FOR EACH PRODUCT, FOR TESTS PERFORMED BY A QUALIFIED TESTING AGENCY.
- 1.7. CLOSEOUT SUBMITTALS
- A. MAINTENANCE DATA: FOR SHEET METAL FLASHING AND TRIM, AND ITS ACCESSORIES, TO INCLUDE IN MAINTENANCE MANUALS.
- 1.8. QUALITY ASSURANCE
- A. SHEET METAL FLASHING AND TRIM STANDARD: COMPLY WITH SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL," CONFORM TO DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
- B. FABRICATOR QUALIFICATIONS: EMPLOY SKILLED WORKERS WHO CUSTOM FABRICATE SHEET METAL FLASHING AND TRIM SIMILAR TO THAT REQUIRED FOR THIS PROJECT AND WHOSE PRODUCTS HAVE A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
- C. MOCKUPS: BUILD MOCKUPS TO VERIFY SELECTIONS MADE UNDER SAMPLE SUBMITTALS, TO DEMONSTRATE AESTHETIC EFFECTS, AND TO SET QUALITY STANDARDS FOR FABRICATION AND INSTALLATION.
1. BUILD MOCKUP OF THE FOLLOWING:
- a. TYPICAL THROUGH-WALL FLASHING, APPROXIMATELY 10 FEET (3.0 M) LONG, INCLUDING SUPPORTING CONSTRUCTION CLEATS, SEAMS, END DAMS ATTACHMENTS.
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.
- 1.9. DELIVERY, STORAGE, AND HANDLING
- A. DO NOT STORE SHEET METAL FLASHING AND TRIM MATERIALS IN CONTACT WITH OTHER MATERIALS THAT CAUSE STAINING, DENTING, OR OTHER SURFACE DAMAGE. STORE SHEET METAL FLASHING AND TRIM MATERIALS AWAY FROM UNCURED CONCRETE AND MASONRY.
- B. PROTECT STRIPPABLE PROTECTIVE COVERING ON SHEET METAL FLASHING AND TRIM FROM EXPOSURE TO SUNLIGHT AND HIGH HUMIDITY, EXCEPT TO EXTENT NECESSARY FOR PERIOD OF SHEET METAL FLASHING AND TRIM INSTALLATION.
- PART 2 - PRODUCTS
- 2.1. PERFORMANCE REQUIREMENTS
- A. GENERAL: SHEET METAL FLASHING AND TRIM ASSEMBLIES SHALL WITHSTAND WIND LOADS, STRUCTURAL MOVEMENT, THERMAL MOVEMENT, INDUCED MOVEMENT, AND EXPOSURE TO WEATHER WITHOUT FAILURE DUE TO DEFECTIVE MANUFACTURE, FABRICATION, INSTALLATION, OR OTHER DEFECTS IN CONSTRUCTION. COMPLETED SHEET METAL FLASHING AND TRIM SHALL NOT RATTLE, LEAK, OR LOOSEN, AND SHALL REMAIN WATER TIGHT.
- B. SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NRCAS' "THE NRCAS ROOFING MANUAL" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES SHOWN UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
- C. THERMAL MOVEMENTS: ALLOW FOR THERMAL MOVEMENTS FROM AMBIENT AND SURFACE TEMPERATURE CHANGES TO PREVENT BUCKLING, OPENING OF JOINTS, OVERSTRESSING OF COMPONENTS, FAILURE OF JOINT SEALANTS, FAILURE OF CONNECTIONS, AND OTHER DETRIMENTAL EFFECTS. BASED ON CALCULATIONS ON SURFACE TEMPERATURES OF MATERIALS DUE TO BOTH SOLAR HEAT GAIN AND NIGHTTIME-SKY HEAT LOSS.
1. TEMPERATURE CHANGE: 120 DEG F (67 DEG C), AMBIENT; 180 DEG F (100 DEG C), MATERIAL SURFACES.
- 2.2. SHEET METALS
- A. STAINLESS-STEEL SHEET: ASTM A 240/A 240M, TYPE 304, DEAD SOFT, FULLY ANNEALED, WITH SMOOTH, FLAT SURFACE.
1. FINISH: 2D (DULL, COIL ROLLED).
- 2.3. FINISHES
- A. COMPLY WITH MAAMMS "METAL FINISHES MANUAL" FOR ARCHITECTURAL AND METAL PRODUCTS FOR RECOMMENDATIONS FOR APPLYING AND DESIGNATING FINISHES.
- B. PROTECT MECHANICAL AND PAINTED FINISHES ON EXPOSED SURFACES FROM DAMAGE BY APPLYING A STRIPPABLE, TEMPORARY PROTECTIVE COVERING BEFORE SHIPPING.
- C. ALL ALUMINUM FLASHINGS/TRIM TO BE FABRICATED TO REQUIRED PROFILES AND DIMENSIONS PRIOR TO INSTALLATION PRIOR TO APPLICATION OF FINISH.
1. ALL FIELD CUTTING OF ALUMINUM FLASHING/COUNTERFLASHING IS TO BE MINIMIZED, ALL CUT EDGES TO BE PROPERLY PREPARED AND FINISH REPAIRED AT CUT EDGE PRIOR TO INSTALLATION.
- D. APPEARANCE OF FINISHED WORK: VARIATIONS IN APPEARANCE OF ABUTTING OR ADJACENT PIECES ARE ACCEPTABLE IF THEY ARE WITHIN ONE-HALF OF THE RANGE OF APPROVED SAMPLES. NOTICEABLE VARIATIONS IN THE SAME PIECE ARE NOT ACCEPTABLE. VARIATIONS IN APPEARANCE OF OTHER COMPONENTS ARE ACCEPTABLE IF THEY ARE WITHIN THE RANGE OF APPROVED SAMPLES AND ARE ASSEMBLED OR INSTALLED TO MINIMIZE CONTRAST.
- 2.4. MISCELLANEOUS MATERIALS
- A. GENERAL: PROVIDE MATERIALS AND TYPES OF FASTENERS, SOLDER, PROTECTIVE COATINGS, PRESURE-SENSITIVE TAPE, AND MISCELLANEOUS ITEMS AS REQUIRED TO COMPLETE SHEET METAL FLASHING AND TRIM INSTALLATION UNLESS OTHERWISE INDICATED.
- B. FASTENERS: WOOD SCREWS, ANNUAL THREADED NAILS, SELF-TAPPING SCREWS, SELF-LOCKING RIVETS AND BOLTS, AND OTHER SUITABLE FASTENERS DESIGNED TO WITHSTAND DESIGN LOADS AS RECOMMENDED BY MANUFACTURER OF PRIMARY SHEET METAL OR MANUFACTURED ITEM
1. GENERAL: BLIND FASTENERS OR SELF-DRILLING SCREWS, GASKETED, WITH HEX-WASHER HEAD.
- a. EXPOSED FASTENERS: HEADS MATCHING COLOR OF SHEET METAL USING PLASTIC CAPS OR FACTORY-APPLIED COATING, PROVIDE METAL-BACKED EPDM OR PVC SEALING WASHERS UNDER HEADS OF EXPOSED FASTENERS BEARING ON WEATHER SIDE OF METAL.
- b. BLIND FASTENERS: HIGH-STRENGTH ALUMINUM OR STAINLESS-STEEL RIVETS SUITABLE FOR METAL BEING FASTENED.
- c. SPIKES AND FERRULES: SAME MATERIAL AS GUTTER; WITH SPIKE WITH FERRULE MATCHING INTERNAL GUTTER WIDTH.
2. FASTENERS FOR STAINLESS-STEEL SHEET: SERIES 300 STAINLESS STEEL.
- C. SOLDER:
1. FOR STAINLESS STEEL: ASTM B 32, GRADE SN60, WITH ACID FLUX OF TYPE RECOMMENDED BY STAINLESS-STEEL SHEET MANUFACTURER.
- D. SEALANT: TAPE: PRESURE-SENSITIVE, 100 PERCENT SOLIDS, POLYISOBUTYLENE COMPOUND AS RELEASED TAPE, BACKING: PROVIDE RELEASE PAPER, BACKING: INSTANTLY ELASTIC, NONSTICK, NONSTAINING TAPE 1/2 INCH (13 MM) WIDE AND 1/8 INCH (3 MM) THICK.
- E. ELASTOMERIC SEALANT: ASTM C 920, ELASTOMERIC SILICONE POLYMER SEALANT (J8-2): OF TYPE 1, GRADE 1, CLASS 250, WITH USE AS SPECIFICATIONS FOR JOINT SEALANTS IN SHEET METAL FLASHING AND TRIM AND REMAIN WATER TIGHT.
- F. BUTYL SEALANT: ASTM C 1311, SINGLE-COMPONENT, SOLVENT-RELEASE BUTYL RUBBER SEALANT; POLYISOBUTYLENE PLASTICIZED; HEAVY BODY FOR HOOKED-TYPE EXPANSION JOINT.
- G. EPOXY SEAM SEALER: TWO-PART, NONCORROSIVE, ALUMINUM SEAM-CEMENTING COMPOUND, RECOMMENDED BY ALUMINUM MANUFACTURER FOR EXTERIOR NONMOVING

- JOINTS, INCLUDING RIVETED JOINTS.
- H. BITUMINOUS SEALANT AND ACID FLUX: PROMPTLY REMOVE ACID FLUX RESIDUE FROM FABRICATION, GENERAL.
- A. GENERAL: CUSTOM FABRICATE SHEET METAL FLASHING AND TRIM TO COMPLY WITH RECOMMENDATIONS IN SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" THAT APPLY TO DESIGN, DIMENSIONS, METAL, AND OTHER CHARACTERISTICS OF ITEM INDICATED. SHOP FABRICATE ITEMS WHEN PRACTICABLE. OBTAIN FIELD MEASUREMENTS FOR ACCURATE FIT BEFORE SHOP FABRICATION.
1. FABRICATE SHEET METAL FLASHING AND TRIM IN THICKNESS OR WEIGHT NEEDED TO COMPLY WITH PERFORMANCE REQUIREMENTS, BUT NOT LESS THAN THAT SPECIFIED FOR EACH APPLICATION AND METAL.
2. OBTAIN FIELD MEASUREMENTS FOR ACCURATE FIT BEFORE SHOP FABRICATION.
3. FORM SHEET METAL FLASHING AND TRIM TO FIT SUBSTRATES WITHOUT EXCESSIVE OIL CANNING, BUCKLING, AND TOOL MARKS. TRUE TO LINE, LEVELS, AND SLOPES; AND WITH EXPOSED EDGES FOLDED BACK TO FORM HEAD.
4. CONCEAL FASTENERS AND EXPANSION PROVISIONS WHERE POSSIBLE. DO NOT USE EXPOSED FASTENERS ON FACES EXPOSED TO VIEW.
- B. FABRICATION TOLERANCES: 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.
- C. SEAMS FOR ALUMINUM: FABRICATE NONMOVING SEAMS WITH FLAT-LOCK SEAMS, FORM SEAMS AND SEAL WITH SILICONE SEALANT, RIVET JOINTS FOR ADDITIONAL STRENGTH.
- D. SEAMS FOR OTHER THAN ALUMINUM: FABRICATE NONMOVING SEAMS IN ACCESSORIES WITH FLAT-LOCK SEAMS, TIN EDGES TO BE SEALED, FORM SEAMS, AND SOLDER.
- E. SEALED JOINTS: FORM NONEXPANSION BUT MOVABLE JOINTS IN METAL TO ACCOMMODATE FLEXIBILITY OF SEALS. SMACNA RECOMMENDS BUTYLS, BUTYLS, AND BUTYLS.
- F. EXPANSION PROVISIONS: WHEN LAPPED OR BAYONET-TYPE EXPANSION PROVISIONS IN THE WORK CANNOT BE USED, FORM EXPANSION JOINTS OF INTERMESHING HOOKED FLANGES, NOT LESS THAN 1 INCH DEEP, FILLED WITH ELASTOMERIC SEALANT CONCEALED WITHIN JOINTS.
- G. CONCEAL FASTENERS AND EXPANSION PROVISIONS WHERE POSSIBLE ON EXPOSED-TO-VIEW SHEET METAL FLASHING AND TRIM, UNLESS OTHERWISE INDICATED.
- H. FABRICATE CLEATS AND ATTACHMENT DEVICES FROM SAME MATERIAL AS ACCESSORY BEING ANCHORED OR FASTENED COMPATIBLE, NONCORROSIVE METAL
1. THICKNESS: AS RECOMMENDED BY SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" FOR APPLICATION BUT NOT LESS THAN THICKNESS OF METAL BEING SECURED.
- 2.6. WALL SHEET METAL FABRICATIONS
- A. THROUGH-WALL FLASHING: FABRICATE CONTINUOUS FLASHINGS IN MINIMUM 96-INCH- (2400-MM) LONG, BUT NOT EXCEEDING 12-FOOT- LONG, SECTIONS, UNDER COPINGS, AND AT SHELF ANGLES. FABRICATE DISCONTINUOUS LINTEL, SILL, AND SIMILAR FLASHINGS TO EXTEND 8 INCHES MINIMUM BEYOND EACH SIDE OF WALL OPENINGS, AND FORM WITH 2-INCH- HIGH, END DAMS OR OF CONFIGURATION ILLUSTRATED WITHIN THE PROJECT DRAWINGS. FABRICATE FROM THE FOLLOWING MATERIALS:
1. STAINLESS STEEL: 26 GAUGE.
2. HEM DRIP EDGE 1/2".
3. JOINT STYLE: OVER-LAP, 4-INCH WIDE MINIMUM, INSTALL SET NEW FLASHING/TRIM IN TWO (2) CONTINUOUS BEADS OF SILICONE SEALANT (EJS-2) AT EACH SIDE OF BACK-UP/SPLICE PLATE
4. MITER CORNERS AND TRANSITIONS, AND WELD/SOLDER WATERTIGHT ALL CORNERS, TRANSITIONS, AND SEAMS.
- 2.7. WALL FLASHINGS ACCESSORIES
- A. HEAD JOINT WEEPS VENTS
1. PROVIDE NON-WOVEN POLYMER MESH WEEP VENTS INSTALLED WITHIN OPEN HEAD JOINT SO EXTERIOR FACE BRICK AT 24" O.C. MAX. OR MINIMUM TWO (2) AT ALL LOCATION OF THROUGH-WALL FLASHINGS, AS INDICATED WITHIN DRAWINGS.
- a. BASIS OF DESIGN: CAVCLEAR WEEP VENTS BY ARCHOVATIONS, INC.
- 1) COLOR: TO BE SELECTED BY ARCHITECT FROM MANUFACTURERS' FULL RANGE.
- b. INSTALL WEEP VENTS 1/2" BACK FROM EXTERIOR FACE OF BRICK, AND SET DIRECTLY ON TOP OF FLASHING.
- c. USE: EVERYWHERE UNLESS NOTED OTHERWISE.
- B. HORIZONTAL CAVITY WEEPS VENTS
1. PROVIDE 0.024" (0.6 MM) THICK HIGH-IMPACT POLYSTYRENE STRIP FORMED WITH .135" (3.429 MM) DEEP CORRUGATIONS. THIS SYSTEM FORMS THE BOTTOM OF THE BED JOINT OF MORTAR AND THE FRONT NOSE OF THE BED JOINT OF MORTAR TO CREATE A WEEP SYSTEM WHEN A LIP BRICK IS USED IN THE FIRST COURSE TO CONCEAL A STEEL LINTEL OR SHELF ANGLE.
- a. BASIS OF DESIGN:
- 1) STONE CAVITY WEEP SCVS912 AS MANUFACTURED BY MASONRY TECHNOLOGIES INC. OR AN ACCEPTABLE COMPARABLE PRODUCT
- a) FOR USE AT ALL HORIZONTAL WEEP FLASHING LOCATIONS SUCH AS THE ENTRANCE RAMPAISIR WALLS
- b. INSTALL WEEP VENTS SET DIRECTLY ON TOP OF FLASHING.
- C. SELF-ADHERING FLASHING: (SJS) MEMBRANE: MODIFIED BITUMINOUS, 40-MIL- (1.0-MM) THICK, SELF-ADHERING SHEET CONSISTING OF 32 MILS (0.8 MM) OF REINFORCED ASPHALT LAMINATED TO AN 8-MIL- (0.2-MM) THICK, CROSS-LAMINATED POLYETHYLENE FILM WITH RELEASE LINER BACKING.
1. PROVIDE ONE OF THE FOLLOWING
- a. GCP PERMA-BARRIER W/P MEMBRANE
- b. HENRY BLUESKIN SA TWF
- c. TREMCO INCORPORATED, AN RPM COMPANY; EXOAR 110 TWF
- d. PRIME ALL SUBSTRATES TO RECEIVE SAF MEMBRANE
- e. SEAL ALL SEAMS AND MEMBRANE EDGES WITH MANUFACTURERS' SEALANT AND/OR LIQUID WATERTIGHT.
- D. MOLDED-SHEET DRAINAGE PANELS
1. NONWOVEN-GEOTEXTILE-FACED, MOLDED-SHEET DRAINAGE PANEL: MANUFACTURED COMPOSITE SUBSTRATE DRAINAGE PANELS, 11MM THICK, CONSISTING OF A NONWOVEN, NEEDLE-PUNCHED GEOTEXTILE FACING SIDE LAMINATED TO 1 SIDE AND A POLYMERIC FILM BONDED TO THE OTHER SIDE OF A 3-DIMENSIONAL, NONBIODEGRADABLE, MOLDED-PLASTIC-SHEET DRAINAGE CORE.
2. BASIS OF DESIGN:
- a. GCP APPLIED TECHNOLOGIES: HYDRODUCT 660 (HORIZONTAL APPLICATIONS) OR APPROVED EQUIVALENT
- b. USE: BENEATH PIER CAP STONES AS INDICATED WITHIN THE DRAWINGS.
- PART 3 - EXECUTION
- 3.1. EXAMINATION
- A. EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER PRESENT, FOR 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. GENERAL: ANCHOR SHEET METAL FLASHING AND TRIM AND OTHER COMPONENTS OF THE WORK SECURELY IN PLACE WITH PROVISIONS FOR THERMAL AND STRUCTURAL MOVEMENT, USE FASTENERS, SOLDER, PROTECTIVE COATINGS, SEPARATORS, SEALANTS, AND OTHER MISCELLANEOUS ITEMS AS REQUIRED TO COMPLETE SHEET METAL FLASHING AND TRIM SYSTEM.
1. INSTALL SHEET METAL FLASHING AND TRIM TRUE TO LINE, LEVELS, AND SLOPES. PROVIDE UNIFORM, NEAT SEAMS WITH MINIMUM EXPOSURE OF SOLDER, WELDS, AND SEALANT.
2. INSTALL SHEET METAL FLASHING AND TRIM TO FIT SUBSTRATES AND TO RESULT IN A NEAT, PROPERLY PERFORMED, WEEP SHAPES AND DIMENSIONS OF SURFACES TO BE COVERED BEFORE FABRICATING SHEET METAL.
3. SPACE CLEATS NOT MORE THAN 12 INCHES (300 MM) APART. ATTACH EACH CLEAT WITH AT LEAST TWO FASTENERS, BEND TABS OVER FASTENERS.
4. INSTALL EXPOSED FLASHING AND TRIM WITH LIMITED OIL CANNING, AND FREE OF BUCKLING AND TOOL MARKS.
5. TORCH CUTTING OF SHEET METAL FLASHING AND TRIM IS NOT PERMITTED.
6. DO NOT USE GRAPHITE PENCILS TO MARK METAL SURFACES.
- B. METAL PROTECTION: WHERE DISSIMILAR METALS CONTACT EACH OTHER, OR WHERE METAL CONTACTS PRESURE-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.
- C. FASTENERS: USE FASTENER SIZES THAT PENETRATE SUBSTRATE, NOT LESS THAN RECOMMENDED BY FASTENER MANUFACTURER TO ACHIEVE MAXIMUM PULL-OUT RESISTANCE.
- D. 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.
- E. SEAL LAP JOINTS AS REQUIRED FOR WATERTIGHT CONSTRUCTION.
1. PREPARE JOINTS AND APPLY SEALANTS TO COMPLY WITH REQUIREMENTS IN SECTION 079200 "JOINT SEALANTS."
- F. SOLDERED JOINTS: CLEAN SURFACES TO BE SOLDERED, REMOVING OILS AND FOREIGN MATTER, PRETREAT EDGES OF SHEETS WITH SOLDER TO WIDTH OF 1-1/2 INCHES (38 MM); HOWEVER, REDUCE PRE-TINNING WHERE PRE-TINNED SURFACE WOULD SHOW IN COMPLETED WORK.
1. DO NOT USE TORCHES FOR SOLDERING.
2. HEAT SURFACES TO RECEIVE SOLDER, AND FLOW SOLDER INTO JOINT, FILL JOINT COMPLETELY, COMPLETELY REMOVE FLUX AND SPATTER FROM EXPOSED SURFACES.

3. STAINLESS-STEEL SOLDERING: TIN EDGES OF UNCOATED SHEETS, USING SOLDER FOR STAINLESS STEEL AND ACID FLUX; PROMPTLY REMOVE ACID FLUX RESIDUE FROM METAL AFTER TINNING AND SOLDERING. COMPLY WITH SOLDER MANUFACTURERS' RECOMMENDED METHODS FOR CLEANING AND NEUTRALIZATION.
- 3.3. WALL FLASHING INSTALLATION
- A. GENERAL: INSTALL SHEET METAL FLASHING TO INTERCEPT AND EXCLUDE PENETRATING MOISTURE, ACCORDING TO CITED SHEET METAL STANDARD UNLESS OTHERWISE INDICATED. COORDINATE INSTALLATION OF WALL FLASHING WITH INSTALLATION OF AIR BARRIER MEMBRANE SYSTEM AND STONE CLADDING REINSTALLATION AND AS INDICATED IN THE PROJECT DRAWINGS.
- B. LAP SEAMS: PROVIDE A CONTINUOUS SPLICE PLATE AT ALL LAP SEAMS WITHIN THE THROUGH-WALL FLASHING SYSTEM. SET NEW SPLICE PLATES ON TOP OF METAL THROUGH-WALL FLASHINGS, CENTERED ON LAP SEAM AND BED INTO TWO (2) CONTINUOUS BEADS OF SILICONE SEALANT (JS-1) AT EACH SIDE OF SPLICE.
1. SPLICE PLATES TO BE SAME MATERIAL AND GAGE AS FLASHINGS AND SAME PROFILE.
- C. ALL OTHER SEAMS IN THROUGH-WALL FLASHINGS TO BE SOLDERED WATERTIGHT.
- D. PRIME ALL SUBSTRATES TO RECEIVE SAF MEMBRANE FLASHINGS.
- E. SEAL ALL EXPOSED EDGES OF SAF AT SEAMS, CUTS, PENETRATIONS, AND TERMINATIONS WITH SYSTEM TERMINATION MASTIC AND/OR LIQUID MEMBRANE.
- 3.4. CLEANING AND PROTECTION
- 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.
- D. REMOVE TEMPORARY PROTECTIVE COVERINGS AND STRIPPABLE FILMS AS SHEET METAL FLASHING AND TRIM ARE INSTALLED UNLESS OTHERWISE INDICATED IN MANUFACTURERS' WRITTEN INSTALLATION INSTRUCTIONS, ON COMPLETION OF SHEET METAL FLASHING AND TRIM INSTALLATION. REMOVE UNUSED MATERIALS AND CLEAN FINISHED SURFACES AS RECOMMENDED BY SHEET METAL FLASHING AND TRIM MANUFACTURER. MAINTAIN SHEET METAL FLASHING AND TRIM IN CLEAN CONDITION DURING CONSTRUCTION.
- E. 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.

SECTION 079200 - JOINT SEALANTS

- PART 1 - GENERAL
- 1.1. RELATED DOCUMENTS
- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
- 1.2. SUMMARY
- A. THIS SECTION INCLUDES JOINT SEALANTS FOR THE FOLLOWING APPLICATIONS, INCLUDING THOSE SPECIFIED BY REFERENCE TO THIS SECTION:
1. EXTERIOR JOINTS IN



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SECTION 079200 - JOINT SEALANTS (CONTINUED)

- 1.6 QUALITY ASSURANCE
- A. INSTALLER QUALIFICATIONS: MANUFACTURER'S AUTHORIZED REPRESENTATIVE WHO IS TRAINED AND APPROVED FOR INSTALLATION OF UNITS REQUIRED FOR THIS PROJECT.
1. INSTALLER MUST HAVE A MINIMUM OF TEN (10) YEARS EXPERIENCE INSTALLING ELASTOMERIC JOINTS OF SAME TYPES.
- a. PROVIDE EXAMPLES AND REFERENCES OF AT LEAST FIVE (5) PROJECTS WITHIN THE LAST FIVE (5) YEARS OF SIMILAR SCALE AND TYPE.
- B. SOURCE LIMITATIONS: OBTAIN ALL TYPES OF JOINT SEALANTS FROM SINGLE SOURCE FROM SINGLE MANUFACTURER WHERE AVAILABLE.
- C. PRODUCT TESTING: TEST JOINT SEALANTS USING A QUALIFIED TESTING AGENCY.
1. TESTING AGENCY QUALIFICATIONS: AN INDEPENDENT TESTING AGENCY QUALIFIED ACCORDING TO ASTM C 1021 TO CONDUCT THE TESTING INDICATED.
2. TEST ACCORDING TO SWIRL'S SEALANT VALIDATION PROGRAM FOR COMPLIANCE WITH REQUIREMENTS SPECIFIED BY REFERENCE TO ASTM C 920 FOR ADHESION AND COHESION UNDER CYCLIC MOVEMENT, ADHESION-IN-PEEL, AND INDENTATION HARDNESS.
- D. MOCKUPS: INSTALL SEALANT IN MOCKUPS OF ASSEMBLIES SPECIFIED IN OTHER SECTIONS THAT ARE INDICATED TO RECEIVE JOINT SEALANTS SPECIFIED IN THIS SECTION. USE MATERIALS AND INSTALLATION METHODS SPECIFIED IN THIS SECTION TO COORDINATE SIZE AND LOCATION WITH STONE CLEANING AND WATER REPELLENT MOCK-UP.
- E. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE.
- 1.7 PROJECT CONDITIONS
- A. DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS UNDER THE FOLLOWING CONDITIONS:
1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT-SEALANT MANUFACTURER OR ARE BELOW 40 DEG F (5 DEG C).
2. WHEN JOINT SUBSTRATES ARE WET.
3. WHERE JOINT WIDTHS ARE LESS THAN THOSE ALLOWED BY JOINT-SEALANT MANUFACTURER FOR APPLICATIONS.
4. WHERE CONTAMINANTS CAPABLE OF INTERFERING WITH ADHESION HAVE NOT YET BEEN REMOVED FROM JOINT SUBSTRATES.

- 1.8 WARRANTY
- A. SPECIAL INSTALLER WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH INSTALLER AGREES TO REPAIR JOINT SEALANTS THAT DO NOT COMPLY WITH PERFORMANCE AND OTHER REQUIREMENTS SPECIFIED IN THIS SECTION WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD: TWO (2) YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
- B. SPECIAL MANUFACTURER WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH JOINT-SEALANT MANUFACTURER AGREES TO FURNISH JOINT SEALANTS TO REPAIR OR REPLACE THOSE THAT DO NOT COMPLY WITH PERFORMANCE AND OTHER REQUIREMENTS SPECIFIED IN THIS SECTION WITHIN SPECIFIED WARRANTY PERIOD.
1. WARRANTY PERIOD:
- a. URETHANE SEALANTS: TEN (10) YEARS FROM DATE OF SUBSTANTIAL COMPLETION (INCLUDED WITH TRAFFIC COATING WARRANTY)
- b. SILANE-MODIFIED POLYMER SEALANTS: TEN (10) YEARS FROM DATE OF SUBSTANTIAL COMPLETION

- SPECIAL WARRANTIES SPECIFIED IN THIS ACTION EXCLUDE DETERIORATION OR FAILURE OF JOINT SEALANTS FROM THE FOLLOWING:
1. MOVEMENT OF THE STRUCTURE CAUSED BY STRUCTURAL SETTLEMENT OR ERRORS ATTRIBUTABLE TO DESIGN OR CONSTRUCTION RESULTING IN STRESSES ON THE SEALANT EXCEEDING SEALANT MANUFACTURER'S WRITTEN SPECIFICATIONS FOR SEALANT ELONGATION AND COMPRESSION.
2. DISINTEGRATION OF JOINT SUBSTRATES FROM NATURAL CAUSES EXCEEDING DESIGN SPECIFICATIONS.
3. MECHANICAL DAMAGE CAUSED BY INDIVIDUALS, TOOLS, OR OTHER OUTSIDE AGENTS.
4. CHANGES IN SEALANT APPEARANCE CAUSED BY ACCUMULATION OF DIRT OR OTHER ATMOSPHERIC CONTAMINANTS.

- PART 2 - PRODUCTS
- 2.1 MATERIALS, GENERAL
- A. COMPATIBILITY: PROVIDE JOINT SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.
- B. ORGANIC EMISSIONS FROM VARIOUS SOURCES USING SMALL-SCALE ENVIRONMENTAL CHAMBERS:
- C. LIQUID-APPLIED JOINT SEALANTS: COMPLY WITH ASTM C 920 AND OTHER REQUIREMENTS INDICATED FOR EACH LIQUID-APPLIED JOINT SEALANT SPECIFIED, INCLUDING THOSE REFERENCE AS ASTM C 920 CLASSIFICATIONS FOR TYPE, GRADE, CLASS, AND USES RELATED TO EXPOSURE AND JOINT SUBSTRATES.
- D. STAIN-TEST-RESISTIVE CHARACTERISTICS: WHERE SEALANTS ARE SPECIFIED TO BE NONSTAINING TO POROUS SUBSTRATES, PROVIDE PRODUCTS THAT HAVE UNDERGONE TESTING ACCORDING TO ASTM C 1248 AND HAVE NOT STAINED POROUS JOINT SUBSTRATES INDICATED FOR PROJECT.
- E. COLORS OF EXPOSED JOINT SEALANTS: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

- 2.2 URETHANE JOINT SEALANTS
- A. URETHANE, M, NS, 25, T, MULTICOMPONENT, NONSAG, PLUS 25 PERCENT AND MINUS 25 PERCENT MOVEMENT CAPABILITY, TRAFFIC-USE, URETHANE JOINT SEALANT: ASTM C920, TYPE M, GRADE NS, CLASS 25, USE NT, O, M, G, A AND FEDERAL SPECIFICATION TT-S-00227
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
- a. BASIS OF DESIGN:
1. SIKAFLEX-2C NS TG
- b. MASTER BUILDER SOLUTIONS
- c. TREMCO INCORPORATED
2. JOINT-SEALANT DESIGNATION: EJS-1.
3. JOINT LOCATIONS:
- a. ALL JOINTS BEING SEALED WITHIN THE UPPER DECK LEVEL TO RECEIVE TRAFFIC DECK COATING AND/OR EXTERIOR WALL COATING. REFER TO S

- 2.3 SILICONE JOINT SEALANTS
- A. SINGLE-COMPONENT, NONSAG, NEUTRAL-CURING SILICONE JOINT SEALANT: ASTM C 920, TYPE S, GRADE NS, CLASS 50, FOR USE NT.
1. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING:
- a. BASIS OF DESIGN:
1. SIKAFLEX-295
- b. DOW CORNING CORPORATION: 795.
- c. TREMCO INCORPORATED: SPECTREM 2.
2. JOINT-SEALANT DESIGNATION: EJS-2.
3. JOINT LOCATIONS:
- a. ALL METAL TO METAL THROUGH-WALL FLASHING LAP JOINTS PER SPECIFICATION SECTION 076200-"SHEET METAL FLASHING AND TRIM"
- b. OTHER JOINTS AS INDICATED.
4. JOINT-SEALANT COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLORS.

- 2.4 SILANE-MODIFIED POLYMER JOINT SEALANTS
- A. SILANE-MODIFIED POLYMER, S, NS, 50, NT, SINGLE-COMPONENT, NONSAG, PLUS 50 PERCENT AND MINUS 50 PERCENT MOVEMENT CAPABILITY, NONTRAFFIC-USE, SILYL-TERMINATED POLYURETHANE JOINT SEALANT: ASTM C920, TYPE S, GRADE NS, CLASS 50, USE NT.
- a. BASIS OF DESIGN:
1. SIKAFLEX-150 LM
- b. MASTER BUILDER SOLUTIONS
- c. TREMCO INCORPORATED
2. JOINT-SEALANT DESIGNATION: EJS-3.
3. JOINT LOCATIONS:
- a. ALL MASONRY TO MASONRY JOINTS
- b. ALL CONCRETE TO MASONRY JOINTS
- c. OTHER JOINTS AS INDICATED.
4. JOINT-SEALANT COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLORS.

- 2.5 PREFORMED FOAM SEALANTS
- A. PREFORMED/PRECOMPRESSED FOAM PARKING DECK EXPANSION JOINT SEALS (HORIZONTAL), MANUFACTURER'S PRECOMRESSED SELF-EXPANDING FOAM JOINT SEALANT MANUFACTURED FROM URETHANE OR EVA (ETHYLENE VINYL ACETATE) FOAM, IMPREGNATED WITH A NONDRYING, WATER-REPELLENT AGENT, AND COATED WITH TRAFFIC-GRADE SILICONE WEARING SURFACE, FACTORY PRODUCE IN PRECOMPRESSED SIZES IN ROLL OR STICK FORM TO FIT JOINT WIDTHS BASED ON DESIGN CRITERIA INDICATED, WITH FACTORY- OR FIELD-APPLIED ADHESIVE FOR BONDING TO SUBSTRATES.
1. BASIS OF DESIGN PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE THE NAMED PRODUCT OR A COMPARABLE PRODUCT MEETING OR EXCEEDING THE REQUIREMENTS OF THE FOLLOWING:
- a. SIS-FR2 BY SIK A EMSEAL.
2. JOINT-SEALANT DESIGNATION: PFS-1.
3. JOINT LOCATIONS:
- a. AT EXISTING TRAFFIC DECK EXPANSION JOINT WHERE INDICATED WITHIN THE PROJECT DRAWINGS.
4. FACTORY FABRICATED TRANSITIONS: PROVIDE MANUFACTURER'S FACTORY FABRICATED TRANSITIONS FOR ALL CHANGES IN PLANE, CORNERS, ETC.
5. PERFORMANCE REQUIREMENTS:
- a. SILICONE TO HAVE BEEN TESTED FOR HARDNESS ACCORDING TO ASTM D2240 (SHORE-A HARDNESS NOT TO EXCEED 25).
- b. PRODUCT MUST BE PROVEN TO HAVE BEEN TESTED TO XENON ARC WEATHEROMETER TESTING WHICH INCLUDES INTENTIONAL DAMAGE TO PRIMARY SURFACE WITH NO PERFORMANCE CHANGE OVER 2000 HOURS ACCORDING TO ASTM G26-77.
- c. PRODUCT MOVEMENT CAPABILITY TO BE MINIMUM +50% AND -50% (TOTAL 100%) OF NOMINAL MATERIAL SIZE.

- d. COVER PLATE: SHOT BLASTED STAINLESS STEEL THICKNESS TO SUIT LOADING CONDITIONS.
- e. FIRE PROTECTION RATING: 2 HOURS, TESTED TO UL 2079.
- f. COLOR: TO BE SELECTED FROM SIK A EMSEAL FULL COLOR RANGE.
- g. ADHESIVE: EPOXY TYPE, FURNISHED BY JOINT SEAL MANUFACTURER.
- h. SILICONE: FIELD APPLIED SEALANT BAND AT FACE OF SEAL TO SUBSTRATE INTERFACE, FURNISHED BY JOINT SEAL MANUFACTURER. SAME MATERIAL AND COLOR AS FACTORY COATING.
- i. ABRASION RESISTANCE: MAXIMUM 1 PERCENT WEIGHT LOSS, TESTED TO ASTM D4060.
- j. FUEL RESISTANCE: PASS ASTM C719 AND ASTM C1135.
- I. INTUMESCENT SEALANT: FIELD APPLIED TO FACE OF JOINTS, FURNISHED BY JOINT SEAL MANUFACTURER.
- B. PREFORMED FOAM SEALANT JOINT SYSTEM (VERTICAL): WHERE JOINT SEALANTS OF THIS TYPE ARE INDICATED, PROVIDE PRODUCTS CONSISTING OF PRECOMPRESSED, NONCYCLIC-EXPANDING POLYURETHANE SEALANT SYSTEM WITH PRE-CURED FACTORY-APPLIED LOW-MODULUS SILICONE FACE.
1. BASIS OF DESIGN PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE THE NAMED PRODUCT OR A COMPARABLE PRODUCT MEETING OR EXCEEDING THE REQUIREMENTS OF THE FOLLOWING:
- a. SOURCE: SEISMIC COLORSEAL BY SIK A EMSEAL OR APPROVED EQUIVALENT
2. JOINT-SEALANT DESIGNATION: PFS-2.
3. JOINT LOCATIONS:
- a. AT VERTICAL WALL EXPANSION JOINTS WHERE INDICATED WITHIN THE PROJECT DRAWINGS.
- b. FACTORY FABRICATED TRANSITIONS: PROVIDE MANUFACTURER'S FACTORY FABRICATED TRANSITIONS FOR ALL CHANGES IN PLANE, CORNERS, ETC.
5. PERFORMANCE REQUIREMENTS:
- a. SILICONE TO HAVE BEEN TESTED FOR HARDNESS ACCORDING TO ASTM D2240 (SHORE-A HARDNESS NOT TO EXCEED 25).
- b. PRODUCT MUST BE PROVEN TO HAVE BEEN TESTED TO XENON ARC WEATHEROMETER TESTING WHICH INCLUDES INTENTIONAL DAMAGE TO PRIMARY SURFACE WITH NO PERFORMANCE CHANGE OVER 2000 HOURS ACCORDING TO ASTM G26-77.
- c. PRODUCT MOVEMENT CAPABILITY TO BE MINIMUM +50% AND -50% (TOTAL 100%) OF NOMINAL MATERIAL SIZE.
- C. ELASTOMERIC NOSING: PROVIDE TWO-COMPONENT POLYURETHANE RESIN MIXED WITH SILICA-FREE SAND AND SILICA-FREE CHOPPED FIBERGLASS AGGREGATES.
1. BASIS OF DESIGN:
- a. EKCURET BY SIK A EMSEAL OR APPROVED EQUIVALENT.
2. USE: TO BE USED AS A COMPONENT OF AN EXPANSION JOINT ASSEMBLY TO FILL BLOCKOUTS ON EACH SIDE OF AN EXPANSION JOINT GAP IN HORIZONTAL APPLICATIONS.

- 2.6 JOINT SEALANT BACKING
- A. GENERAL: PROVIDE SEALANT BACKINGS OF MATERIAL THAT ARE NONSTAINING; ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANT PRIMER, SEALANT DEPTH AND OTHERWISE CONTRIBUTE TO PRODUCING OPTIMUM SEALANT PERFORMANCE.
- B. 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.
- C. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MANUFACTURER FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT-FILLER MATERIALS, OR JOINT SURFACES AT BACK OF JOINT, PROVIDE SELF-ADHESIVE TAPE WHERE APPLICABLE.
- 2.7 MISCELLANEOUS MATERIALS
- A. PRIMER: MATERIAL, RECOMMENDED BY JOINT-SEALANT MANUFACTURER WHERE REQUIRED FOR ADHESION OF SEALANT TO JOINT SUBSTRATES INDICATED, AS DETERMINED FROM PRECONSTRUCTION JOINT-SEALANT-SUBSTRATE TESTS AND FIELD TESTS.
- B. CLEANERS FOR NONPOROUS SURFACES: CHEMICAL CLEANERS ACCEPTABLE TO MANUFACTURERS OF SEALANTS AND SEALANT BACKING MATERIALS, FREE OF OILY RESIDUES OR OTHER SUBSTANCES CAPABLE OF STAINING OR HARMING JOINT SUBSTRATES AND ADJACENT NONPOROUS SURFACES IN ANY WAY, AND FORMULATED TO PROMOTE OPTIMUM ADHESION OF SEALANTS TO JOINT SUBSTRATES.
- C. MASKING TAPE: NONSTAINING, NONABSORBENT MATERIAL COMPATIBLE WITH JOINT SEALANTS AND SURFACES ADJACENT TO JOINTS.

- PART 3 - EXECUTION
- 3.1 EXAMINATION
- A. EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT-SEALANT PERFORMANCE.
- B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 3.2 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. REMOVE ALL FOREIGN MATERIAL FROM JOINT SUBSTRATES THAT COULD INTERFERE WITH ADHESION OF JOINT SEALANT, INCLUDING DUST, PAINTS (EXCEPT FOR PERMANENT, PROTECTIVE COATINGS), OIL, GREASE, AND ADHESIVE REMAINS FROM ADHESION AND COMPATIBILITY BY SEALANT MANUFACTURER), OLD JOINT SEALANTS, OIL, GREASE, WATERPROOFING, WATER REPELLENTS, WATER, SURFACE DIRT, AND FROST.
2. CLEAN POROUS JOINT SUBSTRATE SURFACES BY BRUSHING, GRINDING, MECHANICAL ABRADING, OR A COMBINATION OF THESE METHODS TO PRODUCE A CLEAN, SOUND SUBSTRATE CAPABLE OF DEVELOPING OPTIMUM BOND WITH JOINT SEALANTS, REMOVE LOOSE PARTICLES REMAINING AFTER CLEANING OPERATIONS ABOVE BY VACUUMING OR BLOWING OUT JOINTS WITH OIL-FREE COMPRESSED AIR, POROUS JOINT SUBSTRATES INCLUDE THE FOLLOWING:
- a. MASONRY
- b. CONCRETE
3. REMOVE LATTICE AND FORM-RELEASE AGENTS FROM CONCRETE.
4. 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 OF JOINT SEALANTS, NONPOROUS JOINT SUBSTRATES INCLUDE THE FOLLOWING:
- a. METAL.
- B. JOINT PRIMING: PRIME JOINT SUBSTRATES WHERE RECOMMENDED BY JOINT-SEALANT MANUFACTURER OR AS INDICATED BY PRECONSTRUCTION JOINT-SEALANT-SUBSTRATE TESTS OR PRIOR EXPERIENCE, APPLY PRIMER TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS, CONFINE PRIMERS TO AREAS OF JOINT-SEALANT BOND; DO NOT ALLOW SPILLAGE OR MIGRATION ONTO ADJOINING SURFACES.
- C. MASKING TAPE: USE MASKING TAPE WHERE REQUIRED TO PREVENT CONTACT OF SEALANT OR PRIMER WITH ADJOINING SURFACES THAT OTHERWISE WOULD BE PERMANENTLY STAINED OR DAMAGED BY SUCH CONTACT OR BY CLEANING METHODS REQUIRED TO REMOVE SEALANT SMEARS. REMOVE TAPE IMMEDIATELY AFTER TOOLING WITHOUT DISTURBING JOINT SEAL.

- 3.3 INSTALLATION OF JOINT SEALANTS
- A. GENERAL: COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.
- B. SEALANT INSTALLATION STANDARD: COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.
- C. 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.
1. DO NOT LEAVE GAPS BETWEEN ENDS OF SEALANT BACKINGS.
2. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR SEALANT BACKINGS.
3. REMOVE ABSORBENT SEALANT BACKINGS THAT HAVE COME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.
- D. INSTALL BOND-BREAKER TAPE BEHIND SEALANTS WHERE SEALANT BACKINGS ARE NOT USED AND BACKINGS ARE INDICATED.
- E. 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.
- F. TOOLING OF NONSAG SEALANTS: IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED IN SUBPARAGRAPHS BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED TO ELIMINATE AIR POCKETS, AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH BOTH SIDES OF JOINT.
1. REMOVE EXCESS SEALANT FROM SURFACES ADJACENT TO JOINTS.
2. USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.
3. PROVIDE CONCAVE JOINT PROFILE PER FIGURE B1 IN ASTM C 1193, UNLESS OTHERWISE INDICATED.
- a. USE MASKING TAPE TO PROTECT SURFACES ADJACENT TO RECESSED TOOLED JOINTS.
- G. INSTALLATION OF PREFORMED, FOAM JOINT SEALS: COMPLY WITH THE FOLLOWING REQUIREMENTS:
1. INSTALL EACH LENGTH OF SEAL IMMEDIATELY AFTER REMOVING PROTECTIVE WRAPPING.
2. FULLY SECURE COMPRESSED JOINT SEALS TO JOINT GAP SIDE TO OBTAIN FULL BOND USING EXPOSED PRESSURE-SENSITIVE ADHESIVE OR FIELD-APPLIED ADHESIVE AS RECOMMENDED BY MANUFACTURER.
3. DO NOT PULL OR STRETCH MATERIAL, PRODUCE SEAL CONTINUITY AT SPLICES, ENDS, TURNS, AND INTERSECTIONS OF JOINTS.

SECTION 099113 EXTERIOR PAINTING

- A. EXTERIOR PAINTING FOR THIS PROJECT OCCURS ON THE STAIR RAILINGS IN THE STAIR TOWERS AND INCLUDES THE FOLLOWING:
- a. PROVIDE AND INSTALL ONE COAT OF ALL SURFACE ENAMEL OIL PRIMER BY SHERWIN WILLIAMS OR APPROVED EQUAL, PROVIDE AND INSTALL 2 COATS OF ALL SURFACE ENAMEL OIL BASE FINISH COATS BY SHERWIN WILLIAMS OR APPROVED EQUAL.
- b. INSTALL PRODUCT PER MANUFACTURER'S REQUIREMENTS AND DETAILS ON CONTRACT DOCUMENTS.
- c. PREPARE PRODUCT INSTALLATION LOCATION/SUBSTRATE AS REQUIRED BY PRODUCT MANUFACTURER FOR FULL COMPLIANCE WITH PRODUCT INSTALLATION REQUIREMENTS. THIS INCLUDES REMOVAL OF ALL LOOSE, CRACKED OR PREVIOUSLY PAINTED AREAS WITH RAISED EDGES AND ALL SURFACES SHALL BE CLEANED TO REMOVE DIRT AND DEBRIS.
- d. PRODUCT COLOR SHALL BE SELECTED BY ARCHITECT FROM MANUFACTURER LIST OF STANDARD COLORS OR APPROVED EQUAL. WHEEL STOPS SHALL BE SELECTED BY ARCHITECT, MOCK-UPS SHALL BE 24" LONG SECTIONS OF EXISTING RAILING, ARCHITECT SHALL SELECT FINAL COLOR FORM MOCK-UPS.
- e. PAINT PRODUCT SHALL BE APPLIED IN FIELD WITH BRUSH APPLICATION AND IN TEMPERATURE RANGES PER PAINT MANUFACTURER'S REQUIREMENTS, PROTECT ALL SURFACES UNTIL COATING IS DRY.
- f. CONTRACTOR SHALL BE AN EXPERIENCED INSTALLER WITH NO LESS THAN 5 YEARS PROFESSIONAL EXPERIENCE.
- g. CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION AND STANDARD COLOR SAMPLES TO THE ARCHITECT FOR APPROVAL. ALL SUBMITTALS SHALL INCLUDE THE PROJECT NAME, CONTRACTOR REVIEW STAMP, REFERENCE TO APPLICABLE SPECIFICATION SECTION AND RED HIGHLIGHTS THAT NOTE THE PRODUCT TO BE PROVIDED AND ALL ACCESSORY ITEMS. IN ADDITION, WHERE THE SUBMITTED PRODUCT DIFFERS FROM CONTRACT DOCUMENT SPECIFICATIONS, THESE DIFFERENCES SHALL BE HIGHLIGHTED AS WELL.

- h. CONTRACTOR SHALL PROVIDE 1 YEAR LABOR WARRANTY ON PRODUCT INSTALLATION AND MATERIAL WARRANTY AS PROVIDED BY PRODUCT MANUFACTURER.
- i. IF THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO MATCH AN EXISTING MATERIAL OR PRODUCT, THE CONTRACTOR SHALL FIELD INSPECT AND IDENTIFY THE MATERIAL OR PRODUCT THAT IS REQUIRED TO BE MATCHED. IF THE CONTRACTOR IS UNABLE TO MAKE THIS IDENTIFICATION, THEN HE/SHE SHALL SUBMIT IN WRITING TO THE ARCHITECT THAT IDENTIFICATION OF THE EXISTING MATERIAL OR PRODUCT CANNOT BE DETERMINED.
- B. EXTERIOR PAINTING FOR THIS PROJECT OCCURS ON THE HOLLOW METAL DOORS AND FRAMES AT THE LOWER LEVEL OF THE PARKING GARAGE AND INCLUDE THE FOLLOWING:
- a. PROVIDE AND INSTALL 2 COATS OF ALL SURFACE ENAMEL OIL BASE FINISH COATS BY SHERWIN WILLIAMS OR APPROVED EQUAL. NOTE: DOORS AND FRAMES SHALL RECEIVE PRIMER COAT IN SHOP DURING FABRICATION.
- b. INSTALL PRODUCT PER MANUFACTURER'S REQUIREMENTS AND DETAILS ON CONTRACT DOCUMENTS.
- c. PREPARE PRODUCT INSTALLATION LOCATION/SUBSTRATE AS REQUIRED BY PRODUCT MANUFACTURER FOR FULL COMPLIANCE WITH PRODUCT INSTALLATION REQUIREMENTS. THIS INCLUDES REMOVAL OF ALL LOOSE, CRACKED OR PREVIOUSLY PAINTED AREAS WITH RAISED EDGES AND ALL SURFACES SHALL BE CLEANED TO REMOVE DIRT AND DEBRIS.
- d. PRODUCT COLOR SHALL BE SELECTED BY ARCHITECT FROM MANUFACTURER'S LIST OF STANDARD COLORS OR APPROVED EQUAL. WHEEL STOPS SHALL BE SELECTED BY ARCHITECT, MOCK-UPS SHALL BE 24" SQUARE SECTIONS OF DOOR SURFACE, ARCHITECT SHALL SELECT FINAL COLOR FORM MOCK-UPS.
- e. PAINT PRODUCT SHALL BE APPLIED IN FIELD WITH BRUSH OR APPLICATION AND IN TEMPERATURE RANGES PER PAINT MANUFACTURER'S REQUIREMENTS, PROTECT ALL SURFACES UNTIL COATING IS DRY.
- f. CONTRACTOR SHALL BE AN EXPERIENCED INSTALLER WITH NO LESS THAN 5 YEARS PROFESSIONAL EXPERIENCE.
- g. CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION AND STANDARD COLOR SAMPLES TO THE ARCHITECT FOR APPROVAL. ALL SUBMITTALS SHALL INCLUDE THE PROJECT NAME, CONTRACTOR REVIEW STAMP, REFERENCE TO APPLICABLE SPECIFICATION SECTION AND RED HIGHLIGHTS THAT NOTE THE PRODUCT TO BE PROVIDED AND ALL ACCESSORY ITEMS. IN ADDITION, WHERE THE SUBMITTED PRODUCT DIFFERS FROM CONTRACT DOCUMENT SPECIFICATIONS, THESE DIFFERENCES SHALL BE HIGHLIGHTED AS WELL.
- h. CONTRACTOR SHALL PROVIDE 1 YEAR LABOR WARRANTY ON PRODUCT INSTALLATION AND MATERIAL WARRANTY AS PROVIDED BY PRODUCT MANUFACTURER.
- i. IF THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO MATCH AN EXISTING MATERIAL OR PRODUCT, THE CONTRACTOR SHALL FIELD INSPECT AND IDENTIFY THE MATERIAL OR PRODUCT THAT IS REQUIRED TO BE MATCHED. IF THE CONTRACTOR IS UNABLE TO MAKE THIS IDENTIFICATION, THEN HE/SHE SHALL SUBMIT IN WRITING TO THE ARCHITECT THAT IDENTIFICATION OF THE EXISTING MATERIAL OR PRODUCT CANNOT BE DETERMINED.

SECTION 264112 LIGHTNING PROTECTION - NOT USED

SECTION 264112 LIGHTNING PROTECTION

- A. THE SCOPE OF WORK FOR THE EXISTING LIGHTNING PROTECTION SYSTEM INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
1. CONTRACTOR SHALL INSPECT THE EXISTING SYSTEM AND SUBMIT A REPORT SUMMARIZING THE WORK THAT IS REQUIRED IN ORDER TO ATTAIN APPLICABLE SYSTEM SAFETY AND PERFORMANCE COMPLIANCE/CERTIFICATION.
2. CONNECT ONE SECURITY CAMERA PIPE CLAMP AND CONNECTOR TO THE LIGHTNING PROTECTION SYSTEM.
3. AT ELEVEN (11) PERIMETER BRICK COLUMN LOCATIONS AT THE UPPER LEVEL, TWO AIR TERMINALS DEAD-END TO THE MAIN PERIMETER LINE, PER UL96A REQUIREMENTS, EACH AIR TERMINAL REQUIRES 2 PATHS TO THE GROUND WITH THE EXCEPTION OF BEING ABLE TO DEAD-END ONE AIR TERMINAL UP TO: AN ANCESSIONAL CONDUCTOR LOOP OUT OF THE SECOND AIR TERMINAL BASE MUST BE ADDED AND RUN TO THE MAIN PERIMETER CONDUCTOR.
4. THERE ARE APPROXIMATELY 14 BROKEN AIR TERMINALS ON THE UPPER LEVEL WALL WHICH NEED TO BE REPLACED.
5. THERE ARE TWO (2) COPPER CONDUCTORS ON ONE STAIRWELL PITCHED ROOF THAT ARE DRAPED OVER THE ALUMINUM GUTTER, THIS IS A COMPATIBILITY VIOLATION AND THE CONDUCTORS NEED TO BE CHANGED TO ALUMINUM IN THIS AREA.
6. ONE (1) LOCATION AT THE LOWER LEVEL HAS A CROSS-RUN CONDUCTOR WHICH IS DISCONNECTED, THIS NEEDS TO BE RECONNECTED.
- B. INSTALL ALL PRODUCTS PER MANUFACTURER'S AND CODE REQUIREMENTS, AT THE CONCLUSION OF THE INSTALLATION, THE SYSTEM SHALL BE TESTED PER APPLICABLE STANDARDS AND WRITTEN CERTIFICATION OF THE SYSTEM COMPLIANCE WITH THE LIGHTNING PROTECTION INSTITUTE (LPI) REQUIREMENTS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT. CERTIFICATION SHALL INCLUDE COMPLIANCE WITH THE REQUIREMENTS OF NFPA 70B, UL96, UL96A AND LPI 175.
- C. PREPARE PRODUCT INSTALLATION LOCATION/SUBSTRATE AS REQUIRED BY PRODUCT MANUFACTURER FOR FULL COMPLIANCE WITH PRODUCT INSTALLATION REQUIREMENTS.
- D. INDICATE SEQUENCE OF INSTALLATION IF APPLICABLE TO THIS PRODUCT.
- E. CONTRACTOR SHALL HAVE A MINIMUM OF 10 YEARS EXPERIENCE INSTALLING THIS PRODUCT.
- F. CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION, SAMPLES AND/OR SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL. ALL SUBMITTALS SHALL INCLUDE THE PROJECT NAME, CONTRACTOR REVIEW STAMP, REFERENCE TO APPLICABLE SPECIFICATION SECTION AND RED HIGHLIGHTS THAT NOTE THE PRODUCT TO BE PROVIDED AND ALL ACCESSORY ITEMS. IN ADDITION, WHERE THE SUBMITTED PRODUCT DIFFERS FROM THE CONTRACT DOCUMENT SPECIFICATIONS, THESE DIFFERENCES SHALL BE HIGHLIGHTED AS WELL.
- G. CONTRACTOR SHALL PROVIDE 1 YEAR LABOR WARRANTY ON PRODUCT INSTALLATION AND MATERIAL WARRANTY AS PROVIDED BY PRODUCT MANUFACTURER.
- H. IF THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO MATCH AN EXISTING MATERIAL OR PRODUCT, THE CONTRACTOR SHALL FIELD INSPECT AND IDENTIFY THE MATERIAL OR PRODUCT THAT IS REQUIRED TO BE MATCHED. IF THE CONTRACTOR IS UNABLE TO MAKE THIS IDENTIFICATION, THEN HE/SHE SHALL SUBMIT IN WRITING TO THE ARCHITECT THAT IDENTIFICATION OF THE EXISTING MATERIAL OR PRODUCT CANNOT BE DETERMINED.

SECTION 321713 PARKING BUMPERS

- A. PROVIDE AND INSTALL 72" LONG X 4" HIGH X 6" WIDE RUBBER WHEEL STOPS SKU #3W3134 BY TREETOP PRODUCTS OR APPROVED EQUAL. WHEEL STOPS SHALL BE INSTALLED WITH TREETOP PRODUCTS PREMIUM 2-PART EPOXY ADHESIVE #3F300 OR APPROVED EQUAL. WHEEL STOPS SHALL NOT BE MECHANICALLY FASTENED TO THE PARKING DECK SURFACE.
- B. INSTALL PRODUCT PER MANUFACTURER'S REQUIREMENTS AND LOCATIONS AND DETAILS ON CONTRACT DOCUMENTS.
- C. PREPARE PRODUCT INSTALLATION LOCATION/SUBSTRATE AS REQUIRED BY PRODUCT MANUFACTURER FOR FULL COMPLIANCE WITH PRODUCT INSTALLATION REQUIREMENTS.
- D. PRODUCT COLOR SHALL BE SOLID AS SELECTED BY ARCHITECT FROM MANUFACTURER LIST OF STANDARD COLORS.
- E. INDICATE SEQUENCE OF INSTALLATION, NOTE: COORDINATE INSTALLATION WITH PARKING DECK WATERPROOF COATING INSTALLATION REQUIREMENTS.
- F. INDICATE TEMPERATURE REQUIREMENTS FOR INSTALLING THIS PRODUCT.
- G. CONTRACTOR SHALL HAVE A MINIMUM OF 5 YEARS EXPERIENCE INSTALLING THIS PRODUCT.
- H. CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION AND SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL. ALL SUBMITTALS SHALL INCLUDE THE PROJECT NAME, CONTRACTOR REVIEW STAMP, REFERENCE TO APPLICABLE SPECIFICATION SECTION AND RED HIGHLIGHTS THAT NOTE THE PRODUCT TO BE PROVIDED AND ALL ACCESSORY ITEMS. IN ADDITION, WHERE THE SUBMITTED PRODUCT DIFFERS FROM THE CONTRACT DOCUMENT SPECIFICATIONS, THESE DIFFERENCES SHALL BE HIGHLIGHTED AS WELL.
- I. CONTRACTOR SHALL PROVIDE 1 YEAR LABOR WARRANTY ON PRODUCT INSTALLATION AND MATERIAL WARRANTY AS PROVIDED BY PRODUCT MANUFACTURER.
- J. IF THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO MATCH AN EXISTING MATERIAL OR PRODUCT, THE CONTRACTOR SHALL FIELD INSPECT AND IDENTIFY THE MATERIAL OR PRODUCT THAT IS REQUIRED TO BE MATCHED. IF THE CONTRACTOR IS UNABLE TO MAKE THIS IDENTIFICATION, THEN HE/SHE SHALL SUBMIT IN WRITING TO THE ARCHITECT THAT IDENTIFICATION OF THE EXISTING MATERIAL OR PRODUCT CANNOT BE DETERMINED.
- K. PROTECT THE SYSTEM AND ITS COMPONENTS DURING CONSTRUCTION. SUBSEQUENT REPAIRS FOR DAMAGE TO THE SYSTEM SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR'S EXPENSE, AFTER WORK IS COMPLETE, CLEAN EXPOSED SURFACES WITH A SUITABLE CLEANER THAT WILL NOT HARM OR ATTRACT THE FINISH.

WATERTIGHT TRAFFIC BEARING DECK EXPANSION JOINT

- PART 1 - GENERAL
- 1.01 WORK INCLUDED
- a. THE WORK SHALL CONSIST OF FURNISHING AND INSTALLING WATERPROOF EXPANSION JOINTS IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS AND THE REQUIREMENTS OF THE SPECIFICATIONS. THE EXPANSION JOINT SHALL BE A BLOCKOUT-MOUNTED CHEMICALLY ANCHORED EXTRUDED RUBBER GLAND/NOSING SYSTEM.
- b. Related work
- DIVISION 3 - CAST-IN-PLACE CONCRETE
  - DIVISION 7 - THERMAL & MOISTURE PROTECTION
  - DIVISION 7 - SEALANTS, CAULKING AND WATERPROOFING
- 1.02 SUBMITTALS
- a. GENERAL - SUBMIT THE FOLLOWING ACCORDING TO DIVISION 1 SPECIFICATION SECTION.
- b. STANDARD SUBMITTAL PACKAGE - SUBMIT TYPICAL EXPANSION JOINT DRAWING(S) INDICATING PERTINENT DIMENSIONS, GENERAL CONSTRUCTION, EXPANSION JOINT OPENING DIMENSIONS AND PRODUCT INFORMATION.
- c. SAMPLE OF MATERIAL IS REQUIRED AT TIME OF SUBMITTAL.
- 1.03 PRODUCT DELIVERY, STORAGE AND HANDLING
- a. DELIVER PRODUCTS TO SITE IN MANUFACTURER'S ORIGINAL, INTACT, LABELED CONTAINERS, HANDLE AND PROTECT AS NECESSARY TO PREVENT DAMAGE OR DETERIORATION DURING SHIPMENT, HANDLING AND STORAGE. STORE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 1.04 BASIS OF DESIGN
- a. ALL JOINTS SHALL BE DESIGNED TO MEET THE SPECIFIED PERFORMANCE CRITERIA OF THE PROJECT AS MANUFACTURED BY: (USA & INTERNATIONAL) EMSEAL JOINT SYSTEMS, LTD 25 BRIDLE LANE, WESTBOROUGH, MA 01581-2603, TOLL FREE: 800-526-8365, (CANADA) EMSEAL, LLC 120 CARRIER DRIVE, TORONTO, ONTARIO, CANADA M9W 5R1 TOLL FREE: 800-526-8365. WWW.EMSEAL.COM
- b. ALTERNATE MANUFACTURERS MUST DEMONSTRATE THAT THEIR PRODUCTS MEET OR EXCEED THE DESIGN CRITERIA. SUBMITTAL OF ALTERNATES MUST BE MADE THREE WEEKS PRIOR TO BID OPENING TO ALLOW PROPER EVALUATION TIME.
- 1.05 QUALITY ASSURANCE
- A. THE GENERAL CONTRACTOR WILL CONDUCT A PRE-CONSTRUCTION MEETING WITH ALL PARTIES AND TRADES INVOLVED IN THE TREATMENT OF WORK AT AND AROUND EXPANSION JOINTS INCLUDING, BUT NOT LIMITED TO, CONCRETE, MECHANICAL, ELECTRICAL, HVAC, LANDSCAPING, MASONRY, CURTAIN WALL, WATERPROOFING, FIRE STOPPING, CAULKING, FLOORING AND OTHER FINISH TRADE SUBCONTRACTORS. ALL SUPERINTENDENTS AND FOREMEN WITH RESPONSIBILITY FOR OVERSIGHT AND SETTING OF THE JOINT GAP MUST ATTEND THIS MEETING. THE GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE AND SCHEDULE ALL TRADES AND ENSURE THAT ALL SUBCONTRACTORS UNDERSTAND THEIR RESPONSIBILITIES IN RELATION TO EXPANSION JOINTS AND THAT THEIR WORK CANNOT IMPED AN IMPROVED STRUCTURAL MOVEMENT OF THE EXPANSION JOINTS, OR COMPROMISE THE ATTAINMENT OF WATER TIGHTNESS OR LIFE SAFETY AT EXPANSION JOINTS IN ANY WAY.
- b. THE GENERAL CONTRACTOR SHALL PROVIDE A FIELD REPORT THAT SUMMARIZES THE PROJECT CONDITIONS AND ANY REMEDIAL ACTION NECESSARY TO CORRECT FIELD CONDITIONS (SUBSTRATE, JOINT SIZE, BLOCKOUT, VERTICAL OFFSETS, ETC.) THAT MAY AFFECT EXPANSION JOINT SYSTEM PERFORMANCE.
- c. WARRANTY - MANUFACTURER'S STANDARD WARRANTY SHALL APPLY.
- PART 2 - PRODUCT
- 2.01 GENERAL
- a. PROVIDE TRAFFIC DURABLE, WATERTIGHT, EXPANSION JOINT BY EMSEAL JOINT SYSTEMS FOR EXPANSION JOINTS AND ISOLATION JOINTS IN DECKS. TYPICAL LOCATIONS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: APPLICATIONS FOR JOINTS OVER OCCUPIED SPACE, PARKING DECK JOINTS, STAIR TOWER PERIMETERS, ELEVATOR PERIMETERS, STADIUM TREAD AND RISERS, STADIUM CONCOURSES, AND SOLID SLAB STRUCTURAL EXPANSION JOINTS. SYSTEM SHALL PERFORM WATERPROOFING, TRAFFIC BEARING AND MOVEMENT-ACCOMMODATION FUNCTIONS.
- b. PROVIDE THERMAFLEX TM OR BCR AS MANUFACTURED BY EMSEAL JOINT SYSTEMS LTD AND AS INDICATED ON DRAWINGS FOR HORIZONTAL EXPANSION JOINT LOCATIONS.
- c. EXPANSION JOINT SYSTEM SHALL BE COMPRISED OF: 1.) A HEAT-WELDABLE, SANTOPRENE, THERMOPLASTIC-RUBBER, DOUBLE-CELLED OR MULTI-CELLED, EXTRUSION WITH PERFORATED FLANGES AND, 2.) MANUFACTURER'S GOLD-APPLIED ELASTOMERIC NOSING.
- d. ELASTOMERIC NOSING SHALL BE A TWO-PART POLYURETHANE MATERIAL (EPOXIES NOT PERMITTED) MIXED WITH AGGREGATE WITH SAND PARTICLES NOT TO EXCEED 30-MESH. NOSING MATERIAL SHALL BE POURABLE GRABBLE OF ENCAPSULATING THE PERFORATED FLANGES IN A SINGLE POUR WITHOUT THE LAYING OF A SETTING-BED OR TACK COAT. THE MATERIAL SHALL FLOW SO AS TO FILL VOIDS OR IRREGULARITIES IN CONCRETE BLOCKOUTS AND GENERAL SURFACES. THE MATERIAL SHALL CURE TO FLEXIBLE (NON-RIGID) STATE, SO AS TO ENSURE PROPER MIXING, FLOW ABILITY, AND CONSOLIDATION, MIXED NOSING MATERIAL SHALL HAVE AN AGGREGATE LOADING RATIO BY WEIGHT OF LIQUID RESIN TO AGGREGATE NOT EXCEED 1:2.
- e. SYSTEM TO BE INSTALLED INTO BLOCKOUTS ON EACH SIDE OF THE JOINT-GAP PREPARED TO THE DIMENSIONS OF ¾" DEEP X 3" WIDE (20MM DEEP X 75 MM WIDE) FOR TM AND ¾" DEEP X 3 1/2" WIDE (20MM DEEP X 30MM WIDE) FOR BCR.
- f. FINAL SELECTION OF THE SEAL SIZE TO BE COORDINATED BETWEEN MANUFACTURER, DESIGNER, AND CONTRACTOR(S) IN CONSIDERATION OF EXPECTED MOVEMENTS AS A PRODUCT OF STRUCTURAL DESIGN AND EXPECTED TEMPERATURE VARIATIONS, TAKING INTO ACCOUNT AS-BUILT JOINT-GAP SIZES AND TEMPERATURES AT EXPECTED INSTALLATION TIME, WIDTH OF JOINT-GAPS AT TIME OF CASTING OR CUTTING TO BE ADJUSTED, IF NECESSARY, FROM BASELINE TEMPERATURE USED AND SPECIFIED BY DESIGNER IN DETERMINING SYSTEM SUITABILITY.
- g. MANUFACTURER'S CHECKLIST MUST BE COMPLETED BY EXPANSION JOINT SUBCONTRACTOR AND RETURNED TO MANUFACTURER AT TIME OF ORDERING MATERIAL.
- 2.02 FABRICATION
- a. DIRECTIONAL CHANGES AND TERMINATIONS INTO VERTICAL PLANE SURFACES (WALLS, PARAPETS, ENDS OF DECKS, ETC) AS WELL AS TO TRANSITION THE MATERIAL THROUGH CURBS, TREADS AND RISERS OR OTHER IN-SLAB PLANE CHANGES TO BE PROVIDED BY FACTORY-MANUFACTURED ASSEMBLIES THAT PRESERVE CONTINUITY OF SEAL. TRANSITIONS BETWEEN THERMAFLEX AND ANY OTHER OF MANUFACTURER'S JOINT SYSTEMS IN THE VERTICAL PLANE TO BE EXECUTED ACCORDING TO MANUFACTURER'S DETAILS AND TO BE WARRANTED AS WATERTIGHT.
- PART 3 - EXECUTION
- 3.01 INSTALLATION
- a. PREPARATION OF THE WORK AREA
1. THE CONTRACTOR SHALL PROVIDE PROPERLY FORMED AND PREPARED EXPANSION JOINT OPENINGS CONSTRUCTED TO THE EXACT DIMENSIONS AND ELEVATIONS SHOWN ON MANUFACTURER'S STANDARD SYSTEM DRAWINGS OR AS SHOWN ON THE CONTRACT DRAWINGS. DEVIATIONS FROM THESE DIMENSIONS WILL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER OF RECORD.
2. THE CONTRACTOR SHALL CLEAN THE JOINT OPENING OF ALL CONTAMINANTS IMMEDIATELY PRIOR TO INSTALLATION OF EXPANSION JOINT SYSTEM. REPAIR SPALLED, IRREGULAR OR UNSOUND JOINT SURFACES USING ACCEPTED INDUSTRY PRACTICES FOR REPAIR OF THE SUBSTRATE IN QUESTION. REMOVE PROTRUDING ROUGHNESS TO ENSURE JOINT SIDES ARE SMOOTH. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR DETAILED STEP-BY-STEP INSTRUCTIONS.
3. SYSTEM TO BE INSTALLED BY QUALIFIED SUB-CONTRACTORS ONLY ACCORDING TO DETAILED PUBLISHED INSTALLATION PROCEDURES AND/OR IN ACCORDANCE WITH SPECIFIC INSTALLATION INSTRUCTIONS OF MANUFACTURER'S FIELD TECHNICIAN. BIDS MUST INCLUDE FOR PRESENCE OF PAID-FOR MANUFACTURER'S FIELD TECHNICIAN TO BE PRESENT DURING INITIAL PREPARATION, INSPECTION, AND MATERIAL INSTALLATION.
- 3.02 CLEAN AND PROTECT
- a. PROTECT THE SYSTEM AND ITS COMPONENTS DURING CONSTRUCTION. SUBSEQUENT REPAIRS FOR DAMAGE TO THE SYSTEM SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR'S EXPENSE, AFTER WORK IS COMPLETE, CLEAN EXPOSED SURFACES WITH A SUITABLE CLEANER THAT WILL NOT HARM OR ATTRACT THE FINISH.

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FORCINA PARKING GARAGE REPAIRS

METZGER DR.  
EWING, N.J. 08628

ISSUED FOR:		
REV	DATE	DESCRIPTION
	07.12.22	DD PHASE REVIEW
	09.02.22	85% CD'S
	09.27.22	100% CD'S
	10.21.22	DCA REVIEW
	12/15/23	FOR BID

DRAWING TITLE  
SPECIFICATIONS, GENERAL  
NOTES

PROJECT NO. 22058 DATE 07.12.22

DRAWN BY TCY CHECKED BY RMF

DRAWING NUMBER

A5.3