



CITY OF TAMPA

Bob Buckhorn, Mayor

CONTRACT ADMINISTRATION DEPARTMENT

Michael W. Chucran, Director

ADDENDUM 2

DATE: February 5, 2018

Contract 18-C-00006; South Regional Garage Improvements

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: The Bid Date for the above referenced project is hereby changed to February 13, 2018.

Item 2: Add to the specifications the attached Section 030101 Surface Preparation For Patching.

Item 3: Add to the specifications the attached Section 079200 Joint Sealants.

Item 4: Replace plan sheets S0.0, S1.1 and S2.1 with the attached plan sheets S0.0, S1.1 and S2.1.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to ContractAdministration@tampagov.net.

Jim Greiner

Jim Greiner, P.E., Contract Management Supervisor

SECTION 030101

SURFACE PREPARATION FOR PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the provisions of all labor, materials, supervision and incidentals required to locate and remove all delaminated and unsound concrete, including preparation of cavities created by removal to receive patching material and preparation of existing surface spalls to receive patching material.
- B. Contractor shall fully acquaint himself with the existing job site conditions and discuss the accessibility of the work areas with the Owner.
- C. Provide barricades around the work area with appropriate signage to keep non-construction people from entering work area.
- D. Contractor shall provide all traffic cones or barriers to direct traffic during the repair of the facility. This work shall be done in consultation with the Owner.

1.2 REFERENCES

- A. Applicable Standards:
 - 1. American Concrete Institute (ACI), latest version:

ACI 301	Specifications for Structural Concrete
ACI 546R	Concrete Repair Guide

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Epoxy Coating for existing exposed non-prestressed steel reinforcement:
 - 1. BASF: MasterEmaco P 124 (formerly Emaco P24)
 - 2. Sika Chemical Corporation: Armatec 110
 - 3. Euclid Chemical: Duralprep A.C.

Substitutions may be considered provided complete technical information and job references are furnished to the Owner/Engineer and approved prior to commencement of work.

Changes in products required to suit temperature and environmental conditions at the time of material application shall be specified as separate line items by the Contractor showing credit or additions to the price for the various tasks.

In using the above products, follow strictly the manufacturer's specifications and directions for mixing and application. Also heed all label warnings by manufacturer. Make application in accordance with applicable safety laws.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Areas to be removed: As shown on drawings.
- B. Engineer may mark additional unsound concrete for removal.
- C. Areas to be removed shall be rectangular to provide adequate appearance.
- D. Contractor shall locate and determine the depth of all embedded reinforcement, electrical conduit, post-tensioned tendons, in repair area and mark these locations for reference during concrete removal. Do not cut any embeds unless approved by Engineer.

3.2 REPAIR PREPARATION

- A. Contractor shall review all marked removal and preparation areas and request clarification by Engineer of shoring requirements in questionable areas. Shores shall be in place prior to concrete removal and cavity preparation in any area requiring shores.
- B. All delaminated, spalled and unsound concrete shall be removed from within marked boundary to minimum depth of $\frac{3}{4}$ " using 15 to 30 lb air hammers equipped with chisel point bits. When directed by Engineer, chipping hammers less than 15 lb shall be used to minimize damage to sound concrete. If delaminations exist beyond minimum removal depth, chipping shall continue until all unsound and delaminated concrete has been removed from cavity.
- C. Where embedded reinforcement, anchorages, or electrical conduit is exposed by concrete removal, proceed with caution to avoid damaging it during removal of unsound concrete. If bond between exposed embedded reinforcement/anchorages and adjacent concrete is impaired by Contractor's removal operation, Contractor shall perform additional removal around and beyond perimeter of reinforcement for minimum of $\frac{3}{4}$ " along entire length affected at no cost to owner.
- D. Necessary approvals shall be obtained by the Contractor from authorizing governmental or other agencies prior to abrasive-blasting. Abrasive-blasting operations shall comply with the requirements of OSHA and NIOSH (National Institute for Occupational Safety and Health) Standard PB-246-697.
- E. If rust is present on embedded reinforcement where it enters sound concrete, additional removal of concrete along and beneath reinforcement will be required. Additional removal shall continue until non-rusted reinforcement is exposed, or may be terminated per Engineer's instructions.
- F. Removal of concrete for repair requires saw cutting $\frac{3}{4}$ " into floor slab of the perimeter of the removal, unless a more stringent criteria applies. For vertical and overhead surfaces marked areas shall be saw-cut, ground, or chipped to depth of $\frac{1}{2}$ " to existing concrete, measured from original surface.
- G. Edges of patch areas shall be dressed perpendicular to member face to eliminate feather edges. All edges shall be straight and patch areas square or rectangular-shaped.
- H. Contractor shall exercise extra caution during saw cutting to avoid damaging existing reinforcement particularly post-tensioned tendons, sheathing, electrical conduit and any other embedded items near surface of concrete. Any damage to existing embedded

items shall be repaired by Contractor with Engineer's approved methods at no additional cost to Owner.

3.3 INSPECTION OF REPAIR PREPARATION

- A. After removals are complete, but prior to final cleaning, cavity and exposed reinforcement shall be inspected by Contractor and subject to verification by Engineer for compliance with requirements of this Section.
- B. Contractor shall inspect embedded reinforcement and conduits exposed within cavity for defects due to corrosion or damage resulting from removal operations. Contractor shall notify Engineer of all defective and damaged reinforcement or conduits. Replacement of damaged or defective reinforcement/conduits shall be performed in accordance to the requirements of this Section.

3.4 CLEANING OF REINFORCEMENT

- A. All exposed reinforcing steel shall be cleaned and free of rust and other contaminants. Cleaning shall be accomplished by abrasive methods. Cleaning shall be completed immediately before patch placement to insure that base metal is not exposed to elements and further rusting for extended periods of time. Use powered wire brushes in locations where reinforcing steel cannot be cleaned by abrasive-blasting or water-blasting.
- B. All exposed reinforcing steel shall be coated with a corrosion inhibiting product specified in the Section "Products" in this specification prior to mortar application. Protect prepared surfaces from damage prior to and during patch placement.

3.5 REINFORCEMENT IN REPAIR AREAS

- A. All embedded reinforcement exposed during surface preparation that has lost more than 10% of original cross-sectional area due to corrosion shall be considered defective. Defective reinforcement shall be supplemented in accordance to Engineer's instructions and shall be paid for by Owner.
- B. Damaged reinforcement caused during removals made by Contractor shall be supplemented in accordance to Engineer's instructions and shall be paid for by Contractor.
- C. Supplement defective or damaged embedded reinforcement of equal diameter with a Class B splice in accordance to ACI-318 beyond damaged portion of reinforcement. Secure new reinforcement to existing reinforcement with approved anchors. Supplemental steel shall be A615 Grade 60 steel except where more stringent requirements apply in drawings and/or details.
- D. Loose reinforcement exposed during surface preparation shall be securely anchored prior to patch placement. Loose reinforcement shall be adequately secured with wire ties to bonded reinforcement or with drilled-in anchors. Drilled-in anchors shall be TW-1400 anchors by ITW Ramset/Red Head, Tie-Wire Wedge-All anchors by Simpson Strong-Tie, or approved equal. Engineer will determine adequacy of wire ties and anchors. Securing loose reinforcement is incidental to surface preparation.
- E. Minimum of 1 ½" concrete cover shall be provided over all new/existing reinforcement except where more stringent requirements apply in drawings and/or details.

3.6 PREPARATION OF CAVITY FOR PATCH PLACEMENT

- A. Cavities will be examined prior to commencement of patching operations. Sounding surface shall be part of examination. Delaminations noted during sounding shall be removed as specified in this Section.
- B. All debris shall be removed from site prior to commencement of patching.

END OF SECTION 030101

SECTION 079200

JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each joint sealant product required, including instructions for joint preparation and joint sealant application.
- B. Certificates: Submit certificates from manufacturers of joint sealants attesting that their products comply with Specification requirements and are suitable for the use indicated.
- C. Warranty: Sample of unexecuted manufacturer and installer special warranties.

1.3 QUALITY ASSURANCE

- A. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer.
- B. Review and approve joint details before construction.

1.4 WARRANTY

- A. Special Installer's Warranty: Original statement on Installer's letterhead in which Installer agrees to repair or replace joint sealants that demonstrate deterioration or failure within warranty period specified.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint sealant manufacturer agrees to furnish joint sealants to repair or replace those that demonstrate deterioration or failure under normal use within warranty period specified.
 - 1. Warranty Period for Silicone Sealants: 20 years following date of Substantial Completion.
 - 2. Warranty Period for Urethane Sealants: 5 years following date of Substantial Completion.
- C. Warranty Conditions: Special warranties exclude deterioration or failure of joint sealants in normal use due to structural movement resulting in stresses on joint sealants exceeding sealant manufacturer's written specifications, joint substrate deterioration, mechanical damage, or normal accumulation of dirt or other contaminants.

1.5 PRECONSTRUCTION COMPATIBILITY AND ADHESION TESTING

- A. Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.

1. Use ASTM C 1087 or manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Submit not fewer than five (5) pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
5. Retain subparagraph below only if sealant installation is not critical.
6. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

1.6 PRECONSTRUCTION FIELD-ADHESION TESTING

- A. Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Engineer.
 2. Conduct field tests for each application indicated below:
 - a. Each type of elastomeric sealant and joint substrate indicated.
 - b. Each type of nonelastomeric sealant and joint substrate indicated.
 3. Notify Engineer seven days in advance of dates and times when test joints will be erected.
 4. Delete subparagraph below if not required. Before retaining, determine availability of manufacturer's representative.
 5. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193.
 - b. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 6. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
 7. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.
 - a. Mockups: Build mockups incorporating sealant joints, as follows, to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution:

- (1) Joints in mockups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants, which are specified by reference to this Section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project Site in original unopened containers, or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multicomponent materials.
- B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.8 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturers.
 2. When joint substrates are wet due to rain, frost, condensation or other causes.
 3. Joint Width Conditions: Do not proceed with installation of joint sealants when joint widths are less than allowed by sealant manufacturer for application indicated.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by testing and field experience.

2.2 URETHANE SEALANT FOR HORIZONTAL (NON-COVE) JOINTS

- A. Products: Acceptable joint sealants:
 1. Sikaflex-2c NS TG by Sika
- B. Self-leveling sealants require tooling in accordance with details.
- C. Compounds used for sealants shall not stain concrete or masonry. Aluminum pigmented compounds not acceptable.
- D. The color of sealants shall match adjacent surfaces.

2.3 URETHANE SEALANT FOR COVE JOINTS

- A. Products: Acceptable joint sealants:
 1. Sikaflex-2c NS by Sika
- B. Compound used for sealants shall not stain concrete or masonry. Aluminum pigmented compounds not acceptable.

- C. The color of sealants shall match adjacent surfaces. Owner shall make final color selection for all sealants.

2.4 SILICONE SEALANT AT DECORATIVE FIXTURE REPAIRS

- A. Products: Medium-modulus, one-component, pre-pigmented, neutral-cure elastomeric silicone sealant, specially formulated for use with porous substrates. Sealant shall meet or exceed requirements of ASTM C920, Type S, Grade NS, Class 100/50, Use T, NT, G, M, A, and O.
 - 1. Dow Corning; 790 Silicone Building Sealant.
- B. Compound used for sealants shall not stain concrete. Aluminum pigmented compounds not acceptable. Test sealants for staining potential on all surfaces prior to installation.
- C. The color of sealants shall match adjacent surfaces. Owner shall make final color selection for all sealants.

2.5 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Plastic Foam Joint-Fillers: Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of material indicated below, and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Flexible, non-gassing, closed-cell polyethylene foam, unless otherwise indicated, subject to approval of sealant manufacturer.
 - 1. Exception: Provide open-cell backing if required by sealant manufacturer.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing bond between sealant and joint filler or other materials at back (3rd) surface of joint. Provide self-adhesive taper where applicable.

2.6 MISCELLANEOUS MATERIALS

- A. Primer: Provide type recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate and field tests.
- B. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaner of type acceptable to manufacturer of sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.
- C. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Require installer to inspect joints indicated to receive joint sealants for compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint sealant performance. Obtain installer's written report listing any condition detrimental to performance of joint sealant work. Do not allow joint sealant work to proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturers and the following requirements:
 - 1. Remove all foreign material from joint substrates which could interfere with adhesion of joint sealant, including dust; paint, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; oil; grease; waterproofing; water repellants; water; surface dirt and frost.
 - 2. Clean concrete, 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 from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Remove laitance from concrete.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply 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 with adjoining surfaces which 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 SEALERS

- A. General: Comply with joint sealant manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
 - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.

2. Do not leave gaps between ends of joint-fillers.
 3. Do not stretch, twist, puncture or tear joint-fillers.
 4. Remove absorbent joint-fillers which have become wet prior to sealant application and replace with dry material.
 5. Install bond breaker tape between sealants and joint-fillers, compression seals or back of joint where required to prevent third-side adhesion of sealant to back of joint.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants in concave joint configuration per ASTM C 962, unless otherwise indicated to form smooth, uniform beads of configuration indicated, to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

3.4 FIELD QUALITY CONTROL

- A. Field-adhesion testing: field test joint-sealant adhesion to joint substrates as follows:
1. Extent of testing: Test completed elastomeric sealant joints as follows:
 - a. Perform 3 tests for the first 100 feet of joint length for each type of elastomeric sealant and joint substrate.
 - b. Perform 1 test for each 250 feet of joint length thereafter
 2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; do this by extending cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field-adhesion-test log.
 4. Inspect tested joints and report on the following:
 - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
 - b. Whether sealants filled joint cavities and are free of voids.
 - c. Whether sealant dimensions and configurations comply with specified requirements.
 5. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
 6. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory.

Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 PROTECTION AND CLEANING

- A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and reseal joints with new materials to produce sealant installations with repaired areas indistinguishable from original work.
- B. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by the manufacturer of the sealants and of the products used in the joints.

END OF SECTION 07900

GENERAL STRUCTURAL NOTES								WALTER P MOORE		
PART I - DESIGN CRITERIA		PART III - SELECTIVE DEMOLITION (CONT)			PART V - POST-TENSIONED CONCRETE REPAIRS(CONT)			PART VI - SUBMITTALS (CONT)		
A. STRUCTURAL REPAIR		F. EXECUTION OF SELECTIVE DEMOLITION			2. Concrete Removal: Perform concrete openings at identified areas with tendon damage and at areas where new PT strand, couplers, and anchors are to be installed. Contractor shall not damage tendons and mild reinforcement during concrete removal. Concrete shall be removed by using lightweight pneumatic or electric impact breakers, or by electric hammers with auto-shut-off capability of power interruption when contacting grounded metal. Contractor shall exercise extreme caution when removing concrete near PT anchorages to prevent failure or blowout of the anchor. Concrete bearing against an anchor (V-shaped region in front of an anchor) shall not be removed.			2. Submittal Requirements:		
The purpose of the Contract Documents is to restore the concrete bumper wall to its pre-damaged structural condition and provide supplemental anchorage at decorative fixtures.		1. General: Demolish existing construction as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:			3. Safety: The Contractor shall take all necessary precautions to prevent workers and public access to areas where post-tensioned members are being locked-off and de-tensioned. Contractor shall request Owner to close public access to those areas located along the full length of tendons being locked-off and de-tensioned at the floors above and below before locking-off any strand. The Contractor shall ensure that locking-off and de-tensioning operations are performed safely.			a. All shop drawings must be reviewed and electronically stamped by the Contractor prior to submittal.		
PART II - NON -DESTRUCTIVE EVALUATION		a. Use cutting methods least likely to damage construction to remain or adjoining construction.			4. Stressing: The Contractor shall ensure that locking-off and de-tensioning operations are performed safely.			b. Contractor shall provide the submittal in electronic portable document format (PDF) per the Specifications.		
A. ITEMS EMBEDDED IN CONCRETE STRUCTURES		b. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, slabs, or framing.			G. STRESSING			c. The omission from the shop drawings of any materials required by the Contract Documents to be furnished shall not relieve the Contractor of the responsibility of furnishing and installing such materials, regardless of whether the shop drawings have been reviewed and approved.		
1. Items embedded in concrete structures shall not be damaged during repair work. Embedded items may include mild reinforcement, prestressing reinforcement, dowels, embedded connections, electrical conduits, plumbing, etc.		c. Dispose of demolished items and materials promptly.			1. Methods: Perform post-tensioning by methods and related equipment that are in conformance with generally accepted systems of post-tensioning. Stressing of repaired tendons is typically performed with a tendon coupler and new live PT anchor as shown in Repair Documents. Variations of such generally accepted methods and equipment will be permitted with Engineer approval, provided equal results can be obtained.			C. REPRODUCTION		
2. Items embedded in concrete shall be located by non-destructive evaluation prior to performing any work. Contractor shall mark on the structure the location of embedded items and provide a report to the Engineer.		2. Existing Items to Remain: Contractor to coordinate with Owner (prior to beginning work) on items that are to remain and hence be protected during the demolition process. When permitted by Owner, items may be removed to a suitable and/or protected location.			2. Concrete Repair Material Strength: Do not begin the post-tensioning operations until tests or readings have indicated that the concrete material in the members has attained a compressive strength that is adequate for the requirements of the anchorages but not less than 3750 psi unless otherwise specified on the Contract Drawings.			1. The use of electronic files or reproductions of these contract documents by any Contractor, subcontractor, erector, fabricator, or material supplier in lieu of preparation of shop drawings signifies their acceptance of all information shown hereon as correct, and obligates themselves to any job expense, real or implied, arising due to any errors that may occur hereon.		
3. Engineer may require a particular non-destructive evaluation method for the location of embedded items.		G. DISPOSAL OF DEMOLISHED MATERIALS			3. Equipment: Stress all tendons by means of hydraulic rams, equipped with accurate reading hydraulic pressure gauges that have been individually calibrated with a particular ram to permit the stress in the prestressing steel to be computed at any time. A certified calibration curve shall accompany each ram and gauge set. Immediately recalibrate the ram and gauge set if inconsistencies between the measured elongation and the gauge reading occur.			PART VII - MISCELLANEOUS		
PART III - SELECTIVE DEMOLITION		1. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.			4. Forces: Anchor the prestressing steel at an initial or anchor force that will result in the ultimate retention of the working or effective force shown on the original drawings (if available). Jacking forces shall be those indicated on these General Notes. The post-tensioning installer shall report to the Engineer deviations greater than 10% from the values assumed in the elongation calculations. Required adjustments to the stressing operation may be recommended by the Engineer.			A. CONTRACT DOCUMENTS		
A. DEFINITIONS		2. Disposal: Transport demolished materials off Owner's property and legally dispose of them.			5. Elongations: Keep records of all tendon elongations. Agreement within 10% between the gauge reading and the measured elongation and between the measured and the calculated elongation after stressing will be considered satisfactory. Deviations greater than 10% will be reported to the Engineer prior to completing stressing operation. No tensioning will be permitted until it is demonstrated that the prestressing steel is reasonably free and unbonded in the enclosure. Evidence that the steel is unbonded will be considered satisfactory if inward movement of steel is observed at one end of the tendon when a nominal pull is applied to the steel at the other end. The Engineer may order a force/elongation check at any time. Do not cut off tendons until elongation records have been reviewed and approved in writing by the Engineer.			1. It is the responsibility of the Contractor to obtain all Contract Documents and latest addenda and to submit such documents to all subcontractors and material suppliers prior to the submittal of shop drawings, fabrication of any structural members, and erection in the field.		
1. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.		PART IV - CONCRETE			6. Safety: Precautions shall be taken to prevent workers from standing directly behind, above or in front of the stressing rams. Contractor shall barricade all areas of the structure in the vicinity of tendons before stressing any strand. The Contractor shall ensure that stressing operations are performed safely.			2. The contract structural drawings and specifications represent the repaired structure, and, except where specifically shown, do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequenc		
2. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.		A. CLASSES OF CONCRETE			H. GROUTING ANCHORAGE RECESSES			3. Refer to drawings of existing facility (other than Repair drawings) for complete information including: Expansion joint systems, previous repairs performed in the facility, presence of post-tensioning, location and size of structural members (beams, columns, walls, etc.), slab thickness, and other information relevant to the project.		
B. MATERIAL OWNERSHIP		1. Concrete shall conform to the following requirements			1. Cut the tendon tails within 24 hours after the stressing records have been approved. At slab ends, cut off the excess strand at least 1/2 inch inside the face of the finished concrete surface, and not more than 3/4 inch from the face of the anchorage. For stressing ends located at interior areas, cut off the excess strand as required to provide adequate concrete cover to the strand. Cutting may be done by means of oxyacetylene cutting, abrasive wheel, or hydraulic shears. Do not allow the wedges to become heated.			4. Where member locations are not specifically dimensioned, members are either located on columns lines or are equally spaced between located members.		
1. Except for items or materials indicated to be reused or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site. The materials removed shall be disposed in a proper and legal manner per federal/state or local ordinances.		Classes of Concrete Matrix			2. Cover the end of tendon with approved coating-filled encapsulation cap, or other approved method no more than 24 hours after the tendon tails have been cut to ensure corrosion protection of the exposed tendon.			5. If certain features are not fully shown or specified on the drawings or in the specifications, their construction shall be of the same character as shown or specified in similar conditions.		
2. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.		Location			3. Coat the anchorage recesses with an approved bonding agent and fill flush with a non-shrink, non-stain, chloride free grout compatible for use with prestressing steel or approved equal in accordance with manufacturer's recommendations. Do not allow contamination of the anchorage recess surface that reduces the bonding capacity of the non-shrink grout.			B. CONFLICTS IN STRUCTURAL REQUIREMENTS		
B. MATERIAL OWNERSHIP		Comp Strength PSI			PART VI - SUBMITTALS			1. Where conflict exists among the various parts of the repair contract documents, repair drawings, general notes, and specifications, the strictest requirements, as indicated by the Engineer, shall govern.		
1. Except for items or materials indicated to be reused or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site. The materials removed shall be disposed in a proper and legal manner per federal/state or local ordinances.		Type			A. SUBMITTAL LIST AND SCHEDULE			C. EXISTING CONDITIONS		
2. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.		Exposure Class			1. The Contractor shall prepare a detailed list and schedule of all submittal items to be sent to the Engineer prior to the start of construction. This shall be updated and revised and kept current as the job progresses. The submittal list shall be organized as shown below:			1. The Contractor shall verify all dimensions and conditions of the existing building at the job site and report any discrepancies from assumed conditions shown on the drawings to Engineer prior to the fabrication and erection of any members. Existing dimensions shown on the drawings are for general reference only and should not be used for final construction or detailing.		
B. MATERIAL OWNERSHIP		Max. W/C Ratio			2. The Contractor shall safely shore existing construction wherever existing supports are removed to allow the installation of new work. All shoring methods and sequencing of demolition shall be the responsibility of the Contractor and his engineer.			2. Existing construction shown on the drawings was obtained from existing construction documents and limited site observation. These drawings of existing construction are available for contractor use and shall be referenced for familiarization with existing conditions. However, the available drawings of existing construction are not necessarily complete. The Contractor is responsible for being knowledgeable on information presented in available drawings and shall field verify all pertinent information.		
1. Except for items or materials indicated to be reused or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site. The materials removed shall be disposed in a proper and legal manner per federal/state or local ordinances.		Air Content			3. The Contractor shall perform a survey to locate all existing utilities prior to the start of construction and take care to protect utilities that are to remain in service. Existing civil, mechanical, electrical, plumbing, and emergency protection system servicing any areas outside the work area are to be maintained in operable condition throughout the duration of repairs. Contractor shall make necessary temporary connections to maintain existing utilities in service during the work. Temporary, localized interruption of these systems shall require approval by the Owner.			3. Demolition, cutting, drilling, etc. of existing work shall be performed with great care so as not to jeopardize the structural integrity of the existing building. If any architectural, structural, or MEP members not designated for removal interfere with the new work, the Owner shall be notified immediately and approval obtained prior to removal of those members.		
2. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.		Max. Agg. Size (in.)			4. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.			4. The Contractor shall safely shore existing construction wherever existing supports are removed to allow the installation of new work. All shoring methods and sequencing of demolition shall be the responsibility of the Contractor and his engineer.		
B. MATERIAL OWNERSHIP		Notes			5. The Contractor shall perform a survey to locate all existing utilities prior to the start of construction and take care to protect utilities that are to remain in service. Existing civil, mechanical, electrical, plumbing, and emergency protection system servicing any areas outside the work area are to be maintained in operable condition throughout the duration of repairs. Contractor shall make necessary temporary connections to maintain existing utilities in service during the work. Temporary, localized interruption of these systems shall require approval by the Owner.			5. The Contractor shall perform a survey to locate all existing utilities prior to the start of construction and take care to protect utilities that are to remain in service. Existing civil, mechanical, electrical, plumbing, and emergency protection system servicing any areas outside the work area are to be maintained in operable condition throughout the duration of repairs. Contractor shall make necessary temporary connections to maintain existing utilities in service during the work. Temporary, localized interruption of these systems shall require approval by the Owner.		
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2. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.		5,000			7. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.			7. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.		
B. MATERIAL OWNERSHIP		NWC			8. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.			8. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.		
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B. MATERIAL OWNERSHIP		19			29. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.			29. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.		
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2. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.		30			40. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.			40. The Contractor shall provide dust, odor, and noise protection, and safety measures as necessary for the duration of repairs. Provide all measures necessary to protect the existing structure, building interior, vehicles, facility patrons, and other persons during construction. Such measures shall include, but not limited to temporary bracing, shoring, formwork, protective enclosures, and traffic controls.		
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Project

SOUTH REGIONAL
GARAGE BUMPER
WALL AND
DECORATIVE
FIXTURE REPAIR
TAMPA, FL

Client :

CITY OF TAMPA

No.	Date	Description
1	10/17/17	ISSUED FOR BID
1	02/02/18	Addendum 1

Project Number
S05.17007.00
Approved By :
WW

Drawn By :
AZ
Checked By :
WW/EVC

Certification Statement

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS
AND SPECIFICATIONS COMPLY WITH THE APPLICABLE
MINIMUM BUILDING CODES.

Seal and Signature

ENGINEER OF RECORD: E. WEBB WRIGHT
FL PE NO.: 57639
CERTIFICATION OF AUTHORIZATION NO.: 3818

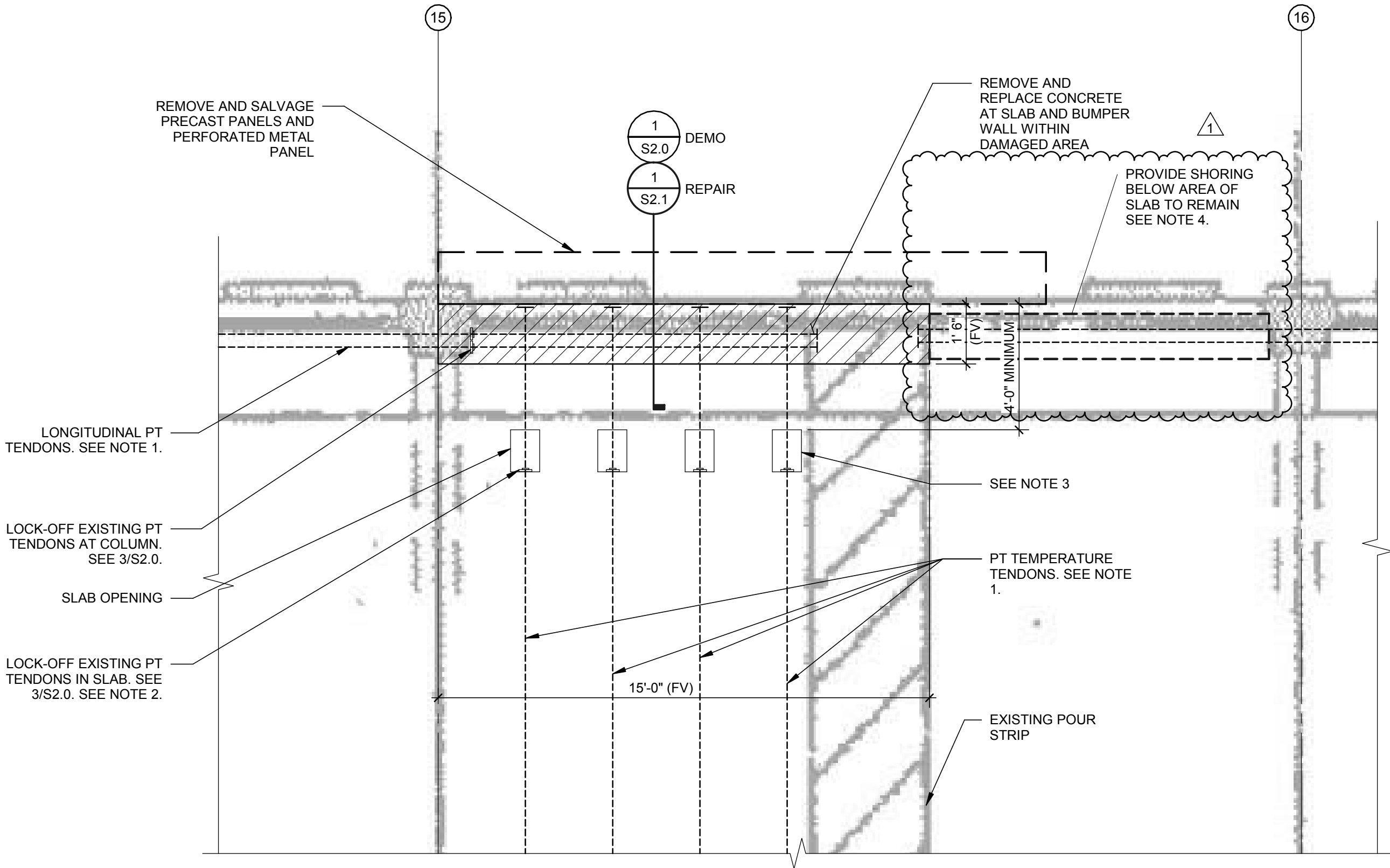
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Sheet

PARTIAL PLAN

Sheet



1

WORK SEQUENCE:

1. LOCATE PT TENDONS AND SEND REPORT TO ENGINEER.
2. REMOVE PRECAST FACADE PANELS AND PERFORATED METAL PANELS.
3. INSTALL SHORING BELOW AREA OF SLAB TO REMAIN AS SHOWN IN PLAN. SHORING SHALL REMAIN IN PLACE UNTIL THE REPAIRS HAVE BEEN COMPLETED AND THE CONCRETE HAS REACHED THE SPECIFIED COMPRESSIVE STRENGTH.
4. LOCK-OFF EXISTING TENDONS AT THE LOCATIONS SHOWN. CUT TENDONS BEHIND ANCHOR LOCK-OFF LEAVING ENOUGH TENDON LENGTH TO INSTALL A NEW COUPLER.
5. REMOVE CONCRETE AT BUMPER WALL AND SLAB EDGE. ENGINEER TO ASSESS EXISTING REINFORCEMENT.
6. INSTALL COUPLER AND NEW PT TENDONS AND ANCHORS.
7. POUR NEW CONCRETE AT SLAB EDGE, EXCLUDING POUR STRIP. SHORING SUPPORTING FORMWORK SHALL REMAIN IN PLACE UNTIL THE REPAIRS HAVE BEEN COMPLETED AND THE CONCRETE HAS REACHED THE SPECIFIED COMPRESSIVE STRENGTH.
8. RE-STRESS TEMPERATURE TENDONS AFTER CONCRETE HAS REACHED THE STRENGTH SPECIFIED IN GENERAL NOTES.
9. RE-STRESS LONGITUDINAL TENDONS.
10. POUR NEW CONCRETE AT POUR STRIP. SEE NOTE 7 REGARDING REMOVAL OF SHORING SUPPORTING FORMWORK.
11. POUR NEW CONCRETE AT BUMPER WALL.
12. REINSTALL PRECAST FACADE PANELS AND PERFORATED METAL PANELS.
13. SEAL CONSTRUCTION JOINTS IN SLAB AND COVE JOINTS.

1

NOTES:

1. TENDONS SHALL BE LOCATED USING NON-DESTRUCTIVE METHODS PRIOR TO DEMOLITION OF SLAB. LOCATION AND NUMBER OF TENDONS SHOWN IS APPROXIMATE. A REPORT OF THE LOCATION OF TENDONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DEMOLITION OF CONCRETE SLAB.
2. ANCHOR LOCK-OFF LOCATIONS ARE APPROXIMATE AND SHALL BE LOCATED A SAFE DISTANCE AWAY FROM EXISTING TENDONS PERPENDICULAR TO TENDON BEING LOCKED-OFF.
3. LOCATE THIS OPENING AWAY FROM EXISTING PT ANCHORS FOR MAIN LONGITUDINAL TENDONS. DO NOT REMOVE CONCRETE BEHIND EXISTING ANCHORS.
4. PROVIDE SHORING AT EDGE OF SLAB ADJACENT TO AREA OF SLAB TO BE DEMOLISHED. DESIGN SHORING FOR A SERVICE LOAD OF 660 POUNDS PER LINEAR FOOT ALONG SLAB EDGE AND USING A SAFETY FACTOR OF 2.0. SUBMIT SHORING SHOP DRAWINGS FOR ENGINEERS APPROVAL. SHORING SHALL BE AT ALL LEVELS AND CONTINUE DOWN TO SLAB-ON-GRADE. SHORES SHALL BE INSTALLED SNUG TIGHT ONLY AGAINST THE SLAB BEING SHORED. DO NOT RELIEVE LOAD FROM THE EXISTING STRUCTURE OR JACK (LIFT) SHORED MEMBERS. INSTALL SHORES VERTICALLY PLUMB. PROVIDE SHIMS AT TOP AND BOTTOM OF SHORES WHERE REQUIRED AT SLOPED SLABS. PROVIDE APPROPRIATE ANCHORAGE AT THE TOP AND BOTTOM OF SHORING ELEMENTS TO PREVENT OVERTURNING OR TIPPING OVER OF THE SHORES.

1

PARTIAL PLAN - DEMOLITION

NO SCALE

S1.1

Project

SOUTH REGIONAL
GARAGE BUMPER
WALL AND
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FIXTURE REPAIR
TAMPA, FL

Client :

CITY OF TAMPA

No.	Date	Description
1	10/17/17	ISSUED FOR BID
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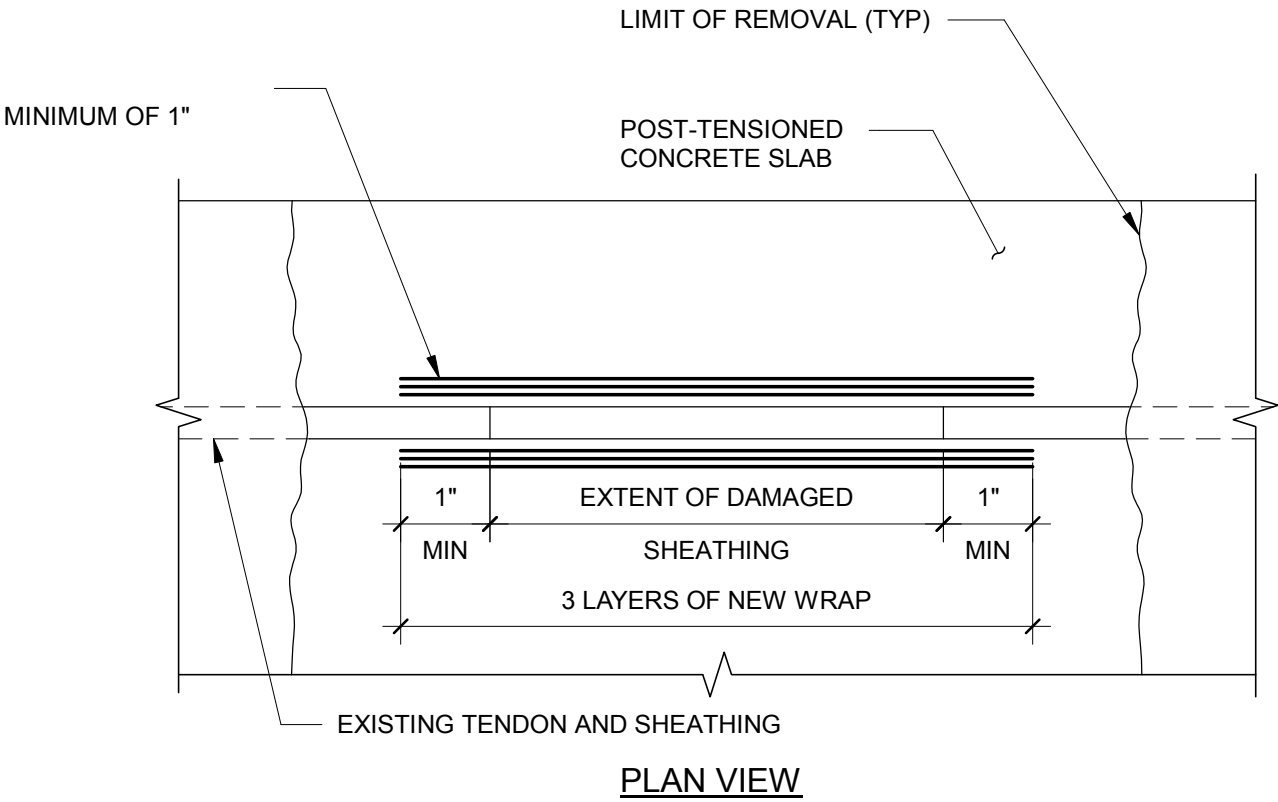
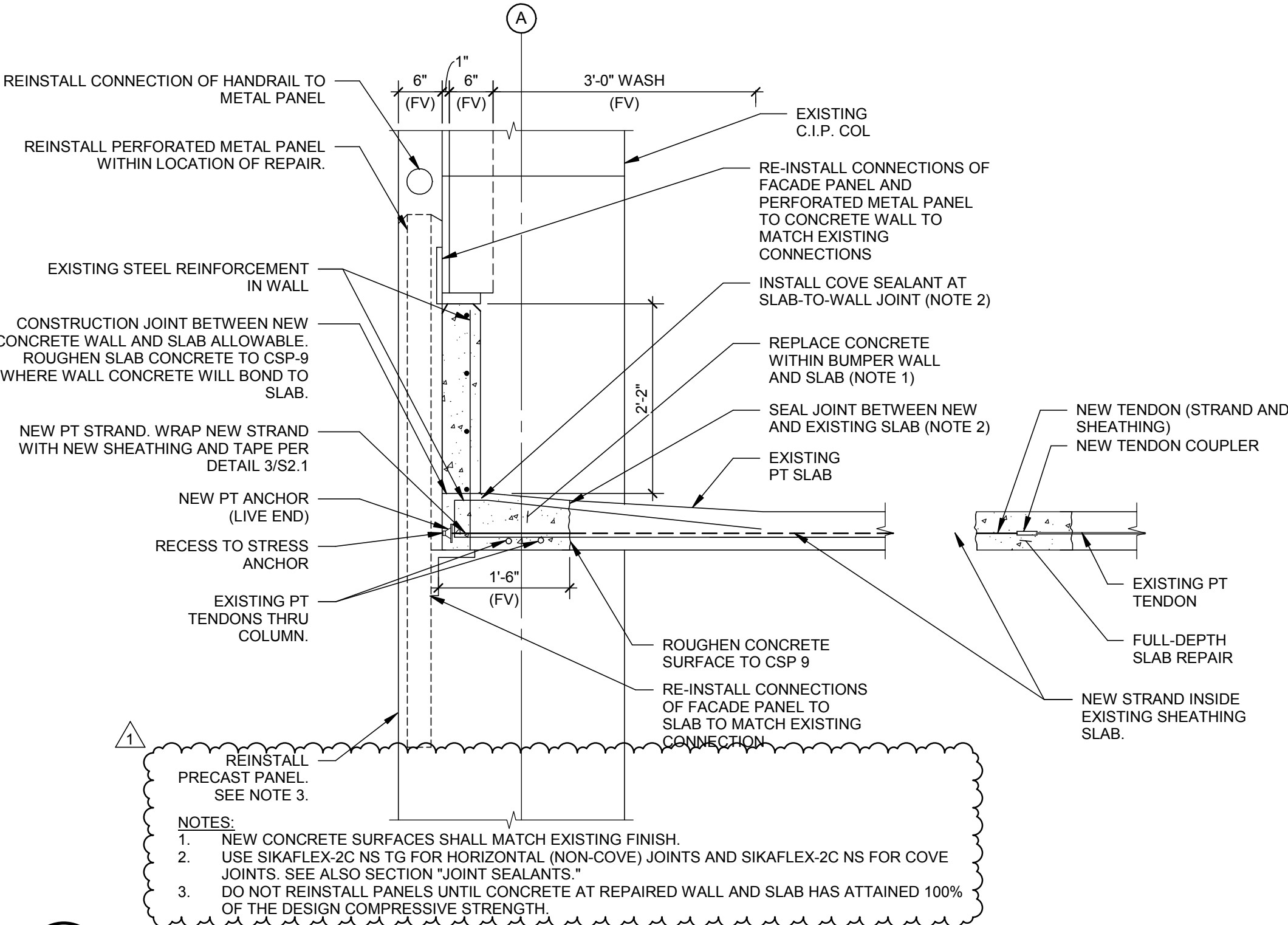
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Sheet

DETAILS

Sheet

S2.1



- NOTES:
1. REMOVE CONCRETE TO EXPOSE UNDAAGED SHEATHING.
 2. REMOVE DAMAGED SHEATHING AND CLEAN TENDON TO GRAY STEEL.
 3. APPLY NON CORROSIVE GREASE TO EXPOSED TENDON.
 4. COVER EXPOSED TENDON WITH PLASTIC SHEATHING. PROVIDE OVERLAP AS SHOWN.
 5. COVER SHEATHING SPLICE WITH WATERPROOF TAPE AND SEAL ENDS TO EXISTING SHEATHING.
 6. THE SHEATHING SHALL BE CONTINUOUSLY EXTRUDED POLYETHYLENE OR POLYPROPYLENE WITH A MINIMUM DENSITY OF 0.034 LB./IN., A MINIMUM THICKNESS OF 50 MILS, AND AN INSIDE DIAMETER AT LEAST 0.03 INCHES GREATER THAN THE MAXIMUM DIAMETER OF THE STRAND.
 7. ACCEPTABLE REPAIR TAPE SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:
a. 3M TAPE NO. 226, 3M, ST. PAUL, MN
b. DENSO LT TAPE, DENSO
 8. THIS WORK IS INCLUDED IN REPAIRS OF ALL POST-TENSIONED CONCRETE MEMBERS.
 9. PLACE SPECIFIED REPAIR MATERIAL OVER EXPOSED TENDON TO PROVIDE A MINIMUM COVER OF 1".

