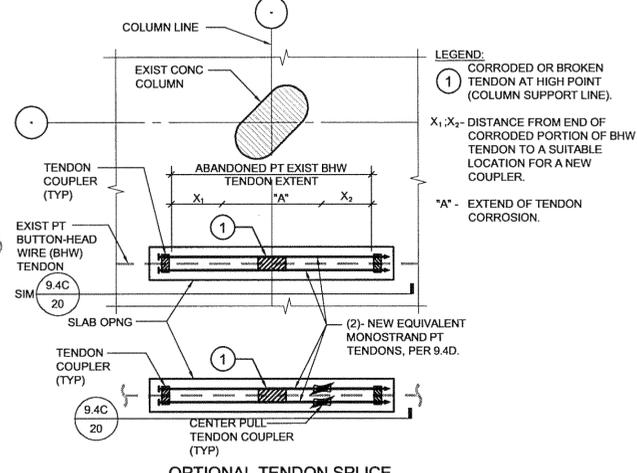
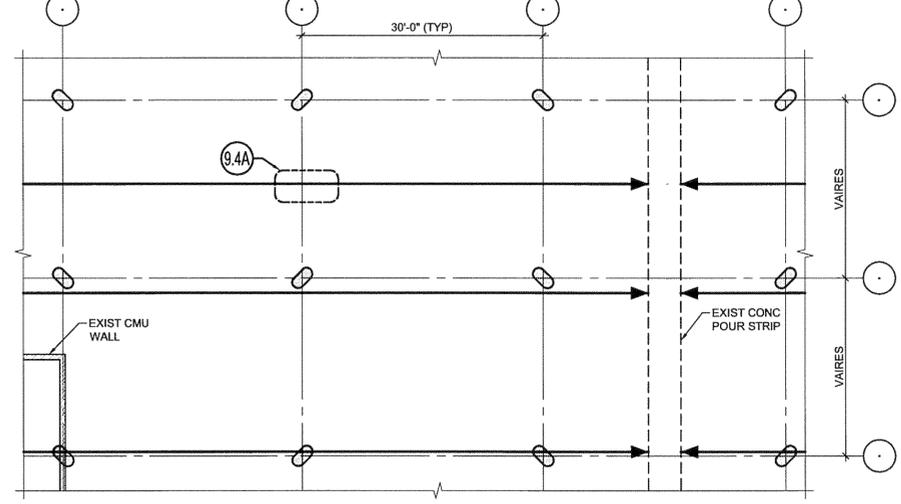


**9.4B** TYPICAL DETAIL - CENTER-PULL TENDON COUPLER TO SPLICE POST-TENSIONING TENDONS  
NTS

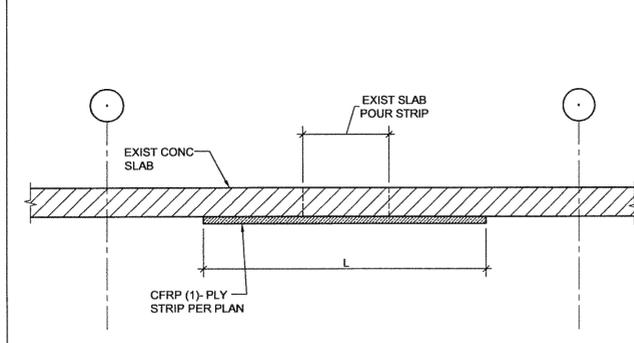


**9.4A** CORRODED/BROKEN BUTTON-HEAD WIRE TENDON AT HIGH POINT (COLUMN SUPPORT LINE)  
NTS



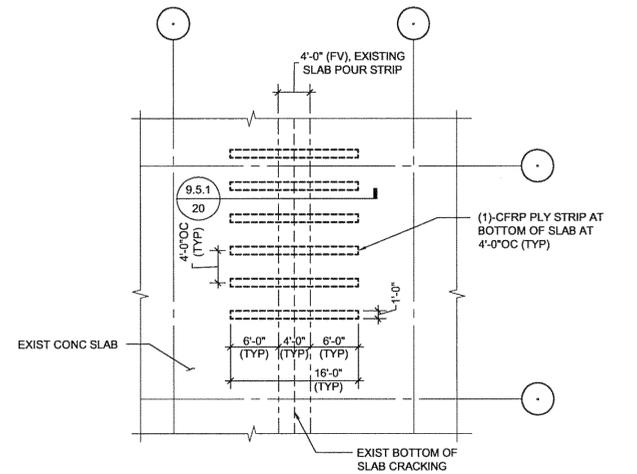
**9.4** CONCEPTUAL CONDITIONS - CORRODED/BROKEN PT TENDONS ON SLAB  
NTS

- NOTES:**
1. DETAILS 9.4A INDICATES TENDON CORROSION OR BROKEN TENDONS FOR DIFFERENT CONDITIONS OBSERVED IN THE FIELD.
  2. THE REPAIR SCENARIO IS INTENDED TO PROVIDE GENERAL GUIDANCE TO THE CONTRACTOR ON THE OVERALL REPAIR PROCEDURE AND AS AN AID FOR PRICING. IT IS EMPHASIZED THAT THESE ASSUMED SCENARIOS DO NOT COVER ALL POSSIBLE CASES OF TENDON DAMAGE.
  3. THE ENGINEER, IN COORDINATION WITH THE RESTORATION PT CONTRACTOR, WILL EVALUATE ON A CASE-BY-CASE BASIS THE APPLICABILITY OF THE REPAIR DETAIL. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INDICATING A MORE DETAILED PROCEDURE AND SPECIFIC REQUIREMENTS FOR PERFORMING PT BUTTON-HEAD WIRE TO MONOSTRAND TENDON REPLACEMENT.
  4. A REPAIRED BUTTON-HEAD WIRE TENDON MAY BREAK AT A DIFFERENT LOCATION DURING RE-STRESSING OPERATIONS DUE TO PRE-EXISTING DAMAGE OR CORROSION AT THE FAILED LOCATION. THE SCOPE OF TENDON REPAIRS MAY INCREASE BECAUSE OF THE POSSIBILITY OF THESE INCIDENTS. CONTRACTOR SHALL INCLUDE A CONTINGENCY IN HIS BID TO ACCOUNT FOR THESE EVENTUALITIES.



- NOTES:**
1. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
  2. SEE PLAN FOR WIDTH, LENGTH, AND LOCATION OF FRP REINFORCEMENT.
  3. \*L\* INDICATES LENGTH OF CFRP PLYS. SEE DETAIL 9.5.
  4. APPLY PROTECTIVE TOP COAT AFTER CFRP INSTALLATION.

**9.5.1** CFRP AT UNDERSIDE  
NTS



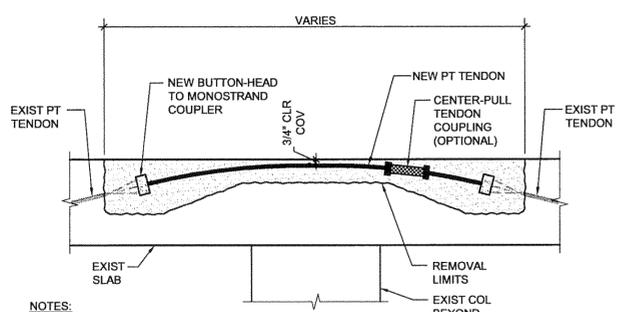
- NOTES:**
1. SEE DETAIL 9.5.1 FOR ADDITIONAL INFORMATION.

**9.5** POUR STRIP BOTTOM SLAB REPAIR  
NTS

EXISTING NUMBER OF BUTTON-HEAD WIRE TENDON	EQUIVALENT NEW MONOSTRAND TENDONS	JACKING FORCE (K)
5	2 - 7/16"Ø	48
6	2 - 7/16"Ø	48
7	2 - 1 1/2"Ø	66
8	2 - 1 1/2"Ø	66

- NOTES:**
1. EXISTING BUTTON-HEAD WIRE TENDONS CONSIST OF 1/4" DIAMETER STRESS-RELIEVED STEEL WIRES.

**9.4D** EQUIVALENT NUMBER OF MONOSTRAND TENDONS TO BUTTON-HEAD WIRE TENDONS  
NTS



- NOTES:**
1. PROVIDE SHORING PER TASK ITEM 9.4 IN SPECIFICATIONS.
  2. REMOVE CONCRETE WITHIN SECTION SHOWN SHADED.
  3. CONCRETE REMOVAL SHALL BE LIMITED TO CREATE ACCESS FOR PT COUPLERS WITHOUT DISRUPTING ANY EXISTING PT CABLES. FULL DEPTH REMOVAL MAY BE REQUIRED. FOR BIDDING PURPOSES, ASSUME 20 SF OF CONCRETE REMOVAL.
  4. REPLACE BROKEN TENDON WITH NEW (2) MONOSTRAND TENDONS PER EQUIVALENT CONVERSION TABLE ON 9.4D WITH COUPLERS.
  5. ACTUAL LENGTH OF SPLICE AND TYPE OF PT HARDWARE TO BE DETERMINED BY THE SPECIALTY CONTRACTOR AND SUBMIT TO ENGINEER FOR APPROVAL.
  6. CONCRETE REMOVAL AND PATCHING SHALL MEET REQUIREMENTS OF PROJECT SPECIFICATIONS (SURFACE PREPARATION FOR PATCHING).
  7. RE-TENSION NEW TENDONS TO FULL CAPACITY PER DIFFERENT CROSS SECTIONAL AREA ON 9.4D.
  8. REPAIR MATERIAL SHALL BE RAPID HARDENING REPAIR MORTAR. REFER TO SPECIFICATIONS FOR APPROVED PRODUCTS. STRICTLY FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PRODUCT INSTALLATION.
  9. PT TENDON REPAIR OPERATIONS SHALL BE PERFORMED ONLY BY A QUALIFIED PTI CERTIFIED RESTORATION CONTRACTOR.
  10. REFER TO SPECIFICATIONS FOR POST-TENSION TENDON AND COUPLER REQUIREMENTS.

**9.4C** TENDON SPLICE DETAIL AT HIGH POINTS  
NTS

**WALTER P MOORE**  
WALTER P. MOORE AND ASSOCIATES, INC.  
1201 MOORHEAD, SUITE 1100  
HOUSTON, TEXAS 77010-5892  
PHONE: 713.630.7300 FAX: 713.630.7399

HOUSTON DALLAS TAMPA ALBUQUERQUE  
DENVER MEMPHIS CHICAGO MILWAUKEE LOS ANGELES

Walter P. Moore and Associates, Inc.  
TBPE Firm Registration No. 1856

STATE OF TEXAS  
MARK ERIC WILLIAMS  
94240  
LICENSED PROFESSIONAL ENGINEER  
Mark Williams  
04/12/10

**CITY OF HOUSTON**  
BUILDING SERVICES DEPARTMENT

THEATER DISTRICT PARKING -  
STRUCTURAL ASSESSMENT  
AND REPAIRS DRAWINGS FOR  
BIDDING AND CONSTRUCTION  
**DETAILS**

FILE NO. C62164	
WBS NO. B-000087-0002-4	
DRAWING SCALE	
VERT. AS SHOWN HORIZ. AS SHOWN	
CITY OF HOUSTON PM	
JAMES REDDINGTON, JR.	
SHEET NO. <b>20</b> OF <b>20</b>	