WAYNE STATE UNIVERSITY
PARKING STRUCTURE #2 2019 RENOVATIONS
PARKING STRUCTURE #5 2019 RENOVATIONS
WSU PROJECT No: 056-322819 (PS #2) & 045-322820 (PS #5)

DETROIT, MICHIGAN

R-001   GENERAL NOTES, AND W.I. LIST
R-101   STRUCTURE #2 LEVELS 1 & 2 PLAN VIEWS
R-102   STRUCTURE #2 LEVELS 3 & 4 PLAN VIEWS
R-103   STRUCTURE #2 LEVELS 5 & 6 PLAN VIEWS
R-104   STRUCTURE #5 LEVEL 2 PLAN VIEW
R-105   STRUCTURE #5 LEVEL 3 PLAN VIEW
R-106   STRUCTURE #5 LEVEL 4 PLAN VIEW
R-501   REPAIR DETAILS
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R-506   W.I. 8.3 REPAIR DETAILS - PS #2
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BIDDING AND CONSTRUCTION
01/24/2019
STRUCTURE #2 (SOG) - LEVEL 1 PLAN VIEW

STRUCTURE #2 - LEVEL 2 PLAN VIEW

WAYNE STATE UNIVERSITY
PARKING STRUCTURE #2 19 REHABILITATIONS
PARKING STRUCTURE #2 5 REHABILITATIONS

1. CONTRACTOR MAY BEGIN MOBILIZING ON APRIL 22, 2019 (ONLY LOCALIZED SPACE CLOSURES).
2. CONTRACTOR SHALL SUBMIT PHASING PLAN FOR OWNER/ENGINEER APPROVAL PRIOR TO START OF WORK, INCLUDING:
   a. COORDINATION WITH WSU.
   b. COORDINATION WITH OTHER ONGOING ACTIVITIES ON CAMPUS. PROVIDE WSU A MINIMUM OF (5) DAYS ADVANCE NOTICE BEFORE CLOSING PARKING SPACES, OR CLOSE ALL PARKING AREAS MINIMUM 1 LEVEL BELOW ONGOING CONCRETE REPAIRS.
   c. PROPOSED REVERSED, LOCATION, AND DURATION OF REPAIR WORK AT EACH WORK AREA.
   d. PROPOSED PHASED MOBILIZATION OF WORK AND OPEN TIMES.
   e. ESTIMATED REQUIRED NUMBER OF WORKERS AND MACHINERY.
3. CONTRACTOR SHALL BE ALLOWED TO CLOSE A MAXIMUM OF 400 PARKING SPACES AT ONE TIME.
4. CONTRACTOR MAY CLOSE ONE STAIR TOWER AT A TIME AS NEEDED TO COMPLETE REPAIR WORK WITH ADVANCE NOTICE PROVIDED TO WSU.
5. CONTRACTOR SHALL輔助與 WSU.
6. CONTRACTOR SHALL SUBMIT PHASING PLAN FOR OWNER/ENGINEER APPROVAL PRIOR TO START OF WORK AND AS NEEDED THROUGHOUT THE PROJECT.
7. CONTRACTOR SHALL PROVIDE WSU ADVANCE NOTIFICATION OF VEHICLES TO BE MOVED FROM WORK AREAS.
8. CONTRACTOR SHALL SUBMIT phasing PLAN FOR OWNER/ENGINEER APPROVAL PRIOR TO START OF WORK, INCLUDING:
   a. PROPOSED REVERSED, LOCATION, AND DURATION OF REPAIR WORK AT EACH WORK AREA.
   b. ESTIMATED REQUIRED NUMBER OF WORKERS AND MACHINERY.
   c. ESTIMATED REQUIRED NUMBER OF VEHICLES TO BE MOVED FROM WORK AREAS.
   d. ESTIMATED REQUIRED NUMBER OF WORKERS AND MACHINERY.
9. CONTRACTOR MAY BEGIN MOBILIZING ON APRIL 22, 2019 (ONLY LOCALIZED SPACE CLOSURES).
10. CONTRACTOR MAY BEGIN MOBILIZING ON APRIL 22, 2019 (ONLY LOCALIZED SPACE CLOSURES).

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PERFORMING PERIODIC TEE STEM INSPECTIONS ARE RECOMMENDED FOR LATER USE OF OPERATIONAL OPENINGS, AND WILL MANNER TO DETERMINE THE CONDITION OF TEE STEMS AND REQUIRED FOR THE PERIODS OF WORK TO BE PERFORMED. REFER TO YOUR PROJECT:
PS #5 GENERAL SHEET NOTES
(APPLIES TO R-104, R-105, & R-106)

1. REFER TO SHEET R-104

PS #5 PHASING NOTES:
(APPLIES TO ALL WORK AT PS#5)

P1. REFER TO SHEET R-104

PS #5 - SCHEDULE NOTES:
(APPLIES TO ALL WORK AT PS#5)

S1. REFER TO SHEET R-104.

VEHICLE ENTRY/EXITS SHALL REMAIN OPEN & FUNCTIONAL AT ALL TIMES.

1. CONTRACTOR MAY COMPLETELY CLOSE LEVELS 2, 3 & 4 FOR 5 WEEKS TO COMPLETE TEE STEM REPAIRS AND FLOOR REPAIRS AFFECTING THE VEHICLE RAMPS AND ON LEVELS 3 & 4. GRADE LEVEL PARKING SHALL REMAIN UNAFFECTED.

2. AFTER 5 WEEKS, THE VEHICLE RAMPS SHALL BE RE-OPENED FOR NORMAL USE, AND CONTRACTOR SHALL:
   · PERFORM REMAINING REPAIRS WITH LOCALIZED PARKING SPACE CLOSURES, NOT TO EXCEED 200 SPACES AT ANY ONE TIME.
   · LOCALIZED CLOSURES SHALL NOT CREATE DEAD ENDS OR AFFECT USE OF VEHICLE RAMPS, AND SHALL MINIMIZE DISRUPTION TO NORMAL OPERATIONS.
VEHICLE ENTRY/EXITS SHALL REMAIN OPEN & FUNCTIONAL AT ALL TIMES.

1. CONTRACTOR MAY COMPLETELY CLOSE LEVELS 2, 3 & 4 FOR 5 WEEKS TO COMPLETE TEE STEM REPAIRS AND FLOOR REPAIRS AFFECTING THE VEHICLE RAMPS AND ON LEVELS 3 & 4. GRADE LEVEL PARKING SHALL REMAIN UNAFFECTED.

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   - LOCALIZED CLOSURES SHALL NOT CREATE DEAD ENDS OR AFFECT USE OF VEHICLE RAMPS, AND SHALL MINIMIZE DISRUPTION TO NORMAL OPERATIONS.

PS #5 GENERAL SHEET NOTES:

1. REFER TO SHEET R-104

PS #5 PHASING NOTES:

(Applies to all work at PS#5)

P1. REFER TO SHEET R-104

PS #5 - SCHEDULE NOTES:

(Applies to all work at PS#5)

S1. REFER TO SHEET R-104.

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EPOXY ANCHOR NEW L-BAR / DOWELS @ 8" O.C. SHOWN. (MIN 8" EMBED)
WITH 6" HOOKS, ANGLED TO FIT IN REPAIR AS PREPARATION FOR REINF. PROVIDE EXPOSED REINF.
COAT ALL EXPOSED CLEAN AND EPOXY SECTION "SURFACE APPROXIMATE.
1. DETERMINE LOCATION, TYPES AND EXTENT OF REPAIRS IN FIELD WITH ENGINEER.
2. POUR W.I. 5.2 REPAIRS FROM TOPSIDE IN COMBINATION WITH FULL-DEPTH FLOOR REPAIRS AS APPLICABLE BASED ON FIELD CONDITIONS. VERIFY IN FIELD WITH ENGINEER.
3. SECURE LOCATION, TYPES AND EXTENT OF REPAIRS IN FIELD WITH ENGINEER.
4. SANDBLAST AND EPOXY COAT ALL BROKEN TEE FLANGE SHEAR CONNECTORS, (OR REMOVE) AND SAVE EXISTING REINF. (NOT SHOWN FOR CLARITY).
5. REPAIRS TO EXISTING CONCRETE AT SLAB MID-DEPTH.
6. LOCATE REPAIRS IN FIELD WITH ENGINEER PRIOR TO START OF WORK.
7. PROVIDE & DOWEL #4 BARS @ 1'-0" O.C. (TYP), DOWELED AT ENDS.
8. PROVIDE #4 DOWELS w/ 8" EMBEDMENT. EPOXY COAT ALL MESH OR REBAR.
9. PROVIDE #4 @ 180° " GRIND (TYP).
10. PROVIDE TOOLED JOINTS IN REPAIR AREAS AS REQUIRED TO MAINTAIN EXISTING JOINT LAYOUT.
11. SANDBLAST AND EPOXY COAT ALL BROKEN TEE FLANGE SHEAR CONNECTORS, (OR REMOVE) AND SAVE EXISTING REINF. (NOT SHOWN FOR CLARITY).
12. PROVIDE SHORING PRIOR TO REMOVAL/REPLACEMENT AND BLOCKOUT TO UNDERSIDE OF SLAB W/(2) COUNTERSUNK FLAT HEADED BOLTS, (2) 4" X 4" X 1/4" KOROLATH "PE" PADS ANCHOR (1) COUNTERSUNK FLAT HEADED BOLTS, (2) 4" X 4" X 1/2" 70 DUROMETER RUBBER TEE STEM (2) SEE NOTE 1.
13. REMOVE & REPLACE CONCRETE WITHIN SECTION SHOWN SHADED.
14. PROVIDE TOPPED CONCRETE SLAB ACROSS JOINT. TOOL AND SEAL JOINT TO MATCH EXISTING.
15. TOPPED CONCRETE SLAB ACROSS JOINT. TOOL AND SEAL JOINT TO MATCH EXISTING.
TEEE STEM REPAIR - END ENCASEMENT

1. DO NOT CUT OR DAMAGE PRESTRESSED STRANDS.
2. DO NOT EXTEND ENCASEMENT BELOW EXISTING BOTTOM SURFACE OF STEM.
3. VERIFY REPAIR IN FIELD WITH ENGINEER PRIOR TO START OF WORK.
4. CONTRACTOR TO PLACE CONCRETE BY METHOD TO GUARANTEE CONSOLIDATION AND NO AMPLITUDE.
5. VERIFY IN FIELD.
6. DO NOT DAMAGE SHORING BELOW STEM PRIOR TO SLAB CONCRETE TO FACILITATE PLACEMENT OF EQUIPMENT.

TEEE STEM REPAIR - END ENCASEMENT

1. DO NOT CUT OR DAMAGE.
2. DO NOT EXTEND ENCASEMENT BELOW EXISTING BOTTOM SURFACE OF STEM.
3. VERIFY REPAIR IN FIELD WITH ENGINEER PRIOR TO START OF WORK.

NOTES:
3. SEE DETAIL 8.4.1 FOR FURTHER INFORMATION.
6. DO NOT EXTEND ENCASEMENT BELOW EXISTING BOTTOM SURFACE OF STEM.

COLUMNS HAUNCH - REMOVE LOOSE CONCRETE AND PAINT

1. DO NOT DAMAGE CONCRETE ENCASEMENT. VERIFY CONCRETE ENCASEMENT.
2. INSTALL COVE SEALANT FOR PATCHING AND OVERLAY.
3. CLEAN AND EPOXY COAT EXPOSED STEEL SURFACES AT EXPANSION JOINT BEAM.
4. INSTALL AND EPOXY COATED L-BARS EACH SIDE OF STEEL I-BEAM.
5. LAP ENDS OF EXISTING STEEL TO L-BAR DOWELS.
6. TIE TO L-BAR DOWELS.

COLUMNS HAUNCH - PATCHING REPAIR

1. DO NOT DAMAGE CONCRETE ENCASEMENT. VERIFY CONCRETE ENCASEMENT.
2. INSTALL COVE SEALANT, EPOXY EMBED 6" MIN W/ HAUNCH.
3. INSTALL COVE SEALANT.
4. REMOVE AND REPLACE ALL PRECASTED L-BARS, INSTALL COVE SEALANT.
5. PROVIDE 3/4" CLEARANCE OF W.I. 5.4A.
6. PROVIDE 70 KIP CAPACITY SHORING BETWEEN SPANDREL BEAMS AS SHOWN (3 LEVELS BELOW BEAM BEING REPAIRED). SHORES LOCATED NO FURTHER THAN 5' FROM BEAM END WHERE REPAIR OCCURS.

WALL REPAIR-PARTIAL DEPTH

1. DO NOT DAMAGE CONCRETE ENCASEMENT. VERIFY CONCRETE ENCASEMENT.
2. CLEAN/PREPARE PREPARATION FOR PATCHING AND OVERLAY.
3. REMOVE AND REPLACE ALL PRECASTED L-BARS, INSTALL COVE SEALANT.
4. PROVIDE 3/4" CLEARANCE OF W.I. 5.4A.
1. REMOVE METAL THRESHOLD PRIOR TO STARTING CONCRETE REPAIRS. SALVAGE AND RE-INSTALL THRESHOLD AFTER COMPLETING STAIR TOWER - OTHER WORK (OR PROVIDE NEW THRESHOLD AT CONTRACTOR'S OPTION).

2. PREPARE AND ROUGHEN CONCRETE BONDING SURFACE IN SECTION "SURFACE PREPARATION FOR PATCHING AND OVERLAY".

3. FULL DEPTH CONCRETE & SUPPLEMENTAL REINFORCEMENT TO BE PAID UNDER W.I. SERIES 3.0.

4. REFER TO SECTION 020010 FOR SPECIFIC REQUIREMENTS.

5. CONCRETE REPAIR AREA HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

6. PROVIDE ALL MATTRESS DOWELS @ 6" O.C. - TOP TO PLACEMENT OF REPAIR MATERIAL.

7. EXIST FLOOR SLAB IN SHADED AREA.

8. PROVIDE (8) #4 DOWELS MATCH EXISTING DIA. PROVIDE @ 12" O.C. HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

9. REPLACE ALL EXIST CRACK/JOINT SEALANT. PROVIDE 4" DETAIL COAT EXISTING TRAFFIC TOPPING (OR MOVING CRACKS).

10. REMOVE LOOSE MEMBRANE (FLOOR SURFACE OR CURB) AND DIMENSIONS IN FIELD PRIOR TO START OF WORK. NOTIFY ENGINEER OF ANY LIMITS OF SURFACE CRACKS < 1/32" WIDE.

11. REMOVE EXISTING SEALANT, PREPARE SURFACE PER SECTION 020010 FOR FURTHER REQUIREMENTS.

12. REMOVE AND REPLACE CONCRETE IN SECTION SHOWN SHAD ED WITH SECTION SHOWN SHAD ED WITH DEPTH CONCRETE REPAIRS PER 11.4.

13. PROVIDE 1½" X 1½" CADDY 4" X 4"出发 PRING (CONSTRUCTION)

14. REPLACE EXISTING METAL PLATE INSTALLED). REPLACE EXISTING METAL PLATE INSTALLED).

15. REMOVE AND REPLACE CONCRETE WITHIN SECTION DETAIL 11.7 (ALT).

16. DO NOT CUT OR DAMAGE ANY EMBEDDED ITEMS.

17. PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

18. PROVIDE @ 12" O.C. BAR CONCRETE TOPPING (TOP TO PLACEMENT OF REPAIR MATERIAL). PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

19. PROVIDE 3/4" CLEARANCE AROUND ALL PERIMETER 3/4" (TYP.) EXIST. CONCRETE SLAB W/6x6 W1.4 x W1.4 SAWCUT PATCH.

20. PROVIDE (8) #4 DOWELS MATCH EXISTING DIA. PROVIDE @ 12" O.C. HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

21. REMOVE AND REPLACE CONCRETE WITHIN SECTION DETAIL 11.7 (ALT).

22. PROVIDE 4" DETAIL COAT EXISTING TRAFFIC TOPPING (OR MOVING CRACKS).

23. PROVIDE 6" EMBED CONCRETE TYP.) STEEL TYP.) BAR CONCRETE TOPPING (TOP TO PLACEMENT OF REPAIR MATERIAL). PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

24. PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

25. PROVIDE (8) #4 DOWELS MATCH EXISTING DIA. PROVIDE @ 12" O.C. HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

26. PROVIDE 4" DETAIL COAT EXISTING TRAFFIC TOPPING (OR MOVING CRACKS).

27. PROVIDE 6" EMBED CONCRETE TYP.) STEEL TYP.) BAR CONCRETE TOPPING (TOP TO PLACEMENT OF REPAIR MATERIAL). PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

28. PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

29. PROVIDE (8) #4 DOWELS MATCH EXISTING DIA. PROVIDE @ 12" O.C. HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

30. PROVIDE 4" DETAIL COAT EXISTING TRAFFIC TOPPING (OR MOVING CRACKS).

31. PROVIDE 6" EMBED CONCRETE TYP.) STEEL TYP.) BAR CONCRETE TOPPING (TOP TO PLACEMENT OF REPAIR MATERIAL). PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

32. PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

33. PROVIDE (8) #4 DOWELS MATCH EXISTING DIA. PROVIDE @ 12" O.C. HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

34. PROVIDE 4" DETAIL COAT EXISTING TRAFFIC TOPPING (OR MOVING CRACKS).

35. PROVIDE 6" EMBED CONCRETE TYP.) STEEL TYP.) BAR CONCRETE TOPPING (TOP TO PLACEMENT OF REPAIR MATERIAL). PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

36. PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

37. PROVIDE (8) #4 DOWELS MATCH EXISTING DIA. PROVIDE @ 12" O.C. HOLD-UP TO BE PROVIDED TO PREVENT MORTAR PATCH FROM SETTING TOOFAST.

38. PROVIDE 4" DETAIL COAT EXISTING TRAFFIC TOPPING (OR MOVING CRACKS).

39. PROVIDE 6" EMBED CONCRETE TYP.) STEEL TYP.) BAR CONCRETE TOPPING (TOP TO PLACEMENT OF REPAIR MATERIAL). PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.

40. PROVIDE CONTINUOUS #3 REBAR @ 12" O.C. EXISTING JOINT.
NOTES:
1. INSTALL COATING ON TOP & DOWN BOTH SIDES OF BUMPER WALLS AS SHOWN. CONDITION @ INTERIOR WALLS SHOWN, SIMILAR REQUIREMENTS APPLY TO INTERIOR SIDE OF EXTERIOR WALLS.
2. PAYMENT IS PER S.F. LOCATE IN FIELD WITH ENGINEER.
3. SUBMIT COLOR SAMPLE & INSTALL MOCKUP FOR OWNER APPROVAL PRIOR TO START OF WORK.
4. COMPLY WITH MANUFACTURERS WRITTEN RECOMMENDATIONS.
5. PROTECT RAILING BASE AND COAT WALL AROUND RAILING.
6. NO COATING ON EXTERIOR OF PARKING STRUCTURE. STOP AT CHAMFERED EDGE.

COAT EXPOSED PORTION OF WALL PANEL TO PROVIDE UNIFORM COATED APPEARANCE WHEN VIEWED FROM RAMP.
SEE DETAIL 2/R-506 FOR INFORMATION SHOWN AND NOT NOTED.