

MDOT STANDARD PLANS

TRAFFIC AND SAFETY STANDARD PLANS

CITY OF ANN ARBOR **ENGINEERING**

HURON PARKWAY BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS **HURON PARKWAY OVER HURON RIVER**

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE CONTRACT DOCUMENTS AND DETAILED SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE LATEST REVISIONS OF THE CITY OF ANN ARBOR PUBLIC SERVICE DEPARTMENT STANDARD SPECIFICATIONS AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION 2012 EDITION AS APPLICABLE.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH **EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE** NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

| R | | | | DATE | |
|---|-----|--|--|-------------|--|
| | | | | DESCRIPTION | |
| | | | | REV. | |
| | ı — | | | | |



CITY OF ANN ARBOR HURON PARKWAY BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

PREPARED UNDER THE SUPERVISION OF JONATHAN DRUMMOND, P.F.

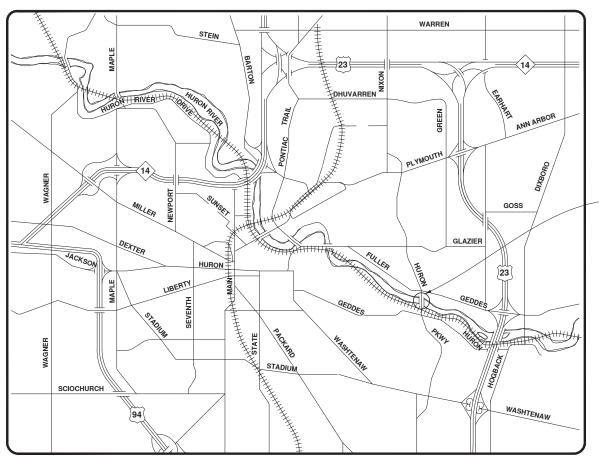
STR 11074

HURON PARKWAY OVER

01-03-2022

ENGINEERING

CITY OF ANN ARBOR FILE NO. 2021-024



VICINITY MAP

NOTES:

THE UNDERGROUND LOCATIONS AND DEPTH SHOWN FOR ALL PUBLIC AND PRIVATE UTILITIES ARE APPROXIMATE. THE CITY OF ANN ARBOR, THE UNIVERSITY OF MICHIGAN, AND FTCH ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. THE CONTRACTOR SHALL CONTACT MISS DIG TO LOCATE ALL MARKED AND UNMARKED UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DELAYS, DAMAGES, COSTS AND/OR CHARGES INCURRED DUE TO AND/OR BY REASON OF ANY UTILITY, STRUCTURE, FEATURES AND/OR SITE CONDITION, WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE, AT ITS SOLE EXPENSE, TO AS GOOD OR BETTER CONDITION, ANY AND ALL UTILITIES, STRUCTURES, FEATURES AND/OR SITE CONDITIONS WHICH ARE IMPACTED BY REASON OF THE WORK, OR INJURED BY ITS OPERATIONS, OR DURING THE OPERATIONS OF ITS SUBCONTRACTORS OR SUPPLIERS.

DRIVEWAYS AND ENTRANCES TO BUILDINGS, REAL PROPERTY, AND THE LIKE SHALL NOT BE BLOCKED EXCEPT FOR SHORT DURATIONS AND ONLY WHEN APPROVED BY THE ENGINEER. VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES AS SPECIFIED IN MAINTAINING TRAFFIC PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUOUS MAINTENANCE OF THE TEMPORARY TRAFFIC CONTROL DEVICES AND SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA AND APPROACHES TO PROJECT SITE, UNTIL THE FINAL COMPLETION OF THE PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.

THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS ARE TO BE APPROVED BY THE ENGINEER. ANY MATERIALS STOCKPILED OR STORED SHALL NOT CREATE AN EROSION PROBLEM, INTERFERE WITH DRAINAGE, OR CREATE INSUFFICIENT SIGHT DISTANCE.

EXISTING STREET NAME, GUIDE, REGULATORY SIGNS, MAILBOXES, ETC., WHICH CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED PRIOR TO CONSTRUCTION, STORED IN A MANNER WHICH WILL PREVENT DAMAGE, AND RE-SET IN LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE OTHER BID ITEMS OF WORK.

A RAILROAD PERMIT IS NOT REQUIRED UNDER THE CONDITION THAT THE CONTRACTOR KEEPS ALL WORKERS, MATERIALS, VEHICLES AND EQUIPMENT ON THE PARKING LOTS SIDE OF THE PIER BETWEEN THE AREA TO BE PATCHED AND THE RAILROAD TRACKS, AND IN NO CIRCUMSTANCE SHALL THE CONTRACTOR ACCESS THE TRACK SIDE OF THE PIER.

| PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION. | | |
|---|-------------------|--|
| PERMIT | ISSUING AUTHORITY | |
| | | |

| I EIXWIII | 1000ING ACTIONITI |
|--------------------------------------|------------------------------------|
| LANE CLOSURE PERMIT* | CITY OF ANN ARBOR ENGINEERING |
| GRADING/SOIL EROSION & SEDIMENTATION | CITY OF ANN ARBOR CUSTOMER SERVICE |
| CONTROL PERMIT* | |
| RIGHT-OF-WAY PERMIT* | CITY OF ANN ARBOR CUSTOMER SERVICE |

^{*} NO COST TO CONTRACTOR

| MISCELLANEOUS QUANTITIES | | | | |
|--|------|-----------------------|--|--|
| ITEM DESCRIPTION | Unit | Estimated Quantity | | |
| Certified Payroll Compliance and Reporting | LSUM | 1.0 | | |
| General Conditions, Max. \$ | LSUM | 1.0 | | |

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH $\frac{1}{2}$ " TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

UNLESS OTHERWISE SHOWN ON THE PLANS PROVIDE MINIMUM CONCRETE CLEAR

COVER FOR REINFORCEMENT ACCORDING TO THE FOLLOWING: CONCRETE CAST AGAINST EARTH: 3 IN. PRESTRESSED BEAMS: ALL OTHER UNLESS SHOWN ON PLANS: 2 IN.

REMOVAL OF EXISTING HMA OVERLAY, HMA CAP OR HMA PATCHES AS A RESULT OF REMOVAL OF OTHER SUPERSTRUCTURE ITEMS SHALL BE INCLUDED IN THE REMOVAL OF THOSE ITEMS AND SHALL NOT BE PAID FOR SEPARATELY

HURON RIVER WATER LEVEL IS SUBJECT TO CHANGE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING A DETERMINATION OF WATER LEVELS THAT MAY EXIST

MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. THE PREVENTIVE MEASURES SHALL BE EFFECTIVE. IF DEBRIS FALLS OFF THE STRUCTURE, IT SHALL BE REMOVED IMMEDIATELY.

GEOTEXTILE LINER SHALL BE PLACED ON ALL SLOPES PRIOR TO PLACING RIPRAP. PAYMENT FOR GEOTEXTILE LINER SHALL BE INCLUDED IN PAYMENT FOR RIPRAP AND WILL NOT BE PAID FOR SEPARATELY.

LOW TEMPERATURE PROTECTION OF CONCRETE PATCHING MATERIALS SHALL BE APPLIED ACCORDING TO SECTION 706.03 J. OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE

NO PORTION OF THE FORMWORK OR FALSEWORK SHALL ENCROACH ON THE **EXISTING UNDERCLEARANCE.**

ALL REINFORCEMENT BARS SHALL BE NEW AND BE EPOXY COATED.

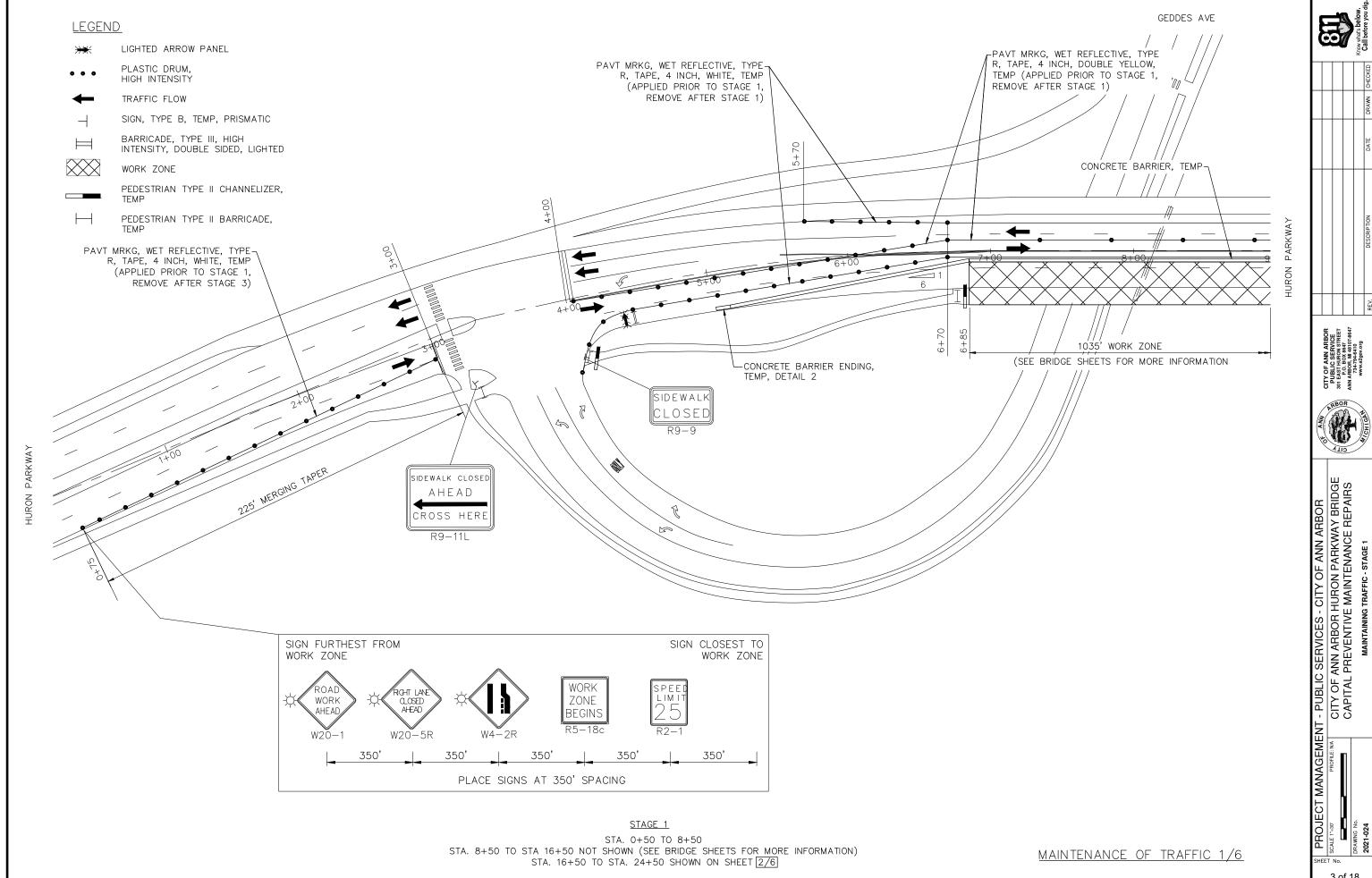
| PUBLIC UTILITY CONTACT INFORMATION | | | |
|------------------------------------|---|----------------------------------|--|
| WATER | CITY OF ANN ARBOR FIELD OPERATIONS SERVICE UNIT | DAN WOODEN (734) 794-6350 | |
| SANITARY | W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD | TRAVIS CONLEY | |
| | ANN ARBOR, MI 48108 | (734) 794-3325 | |
| STORM | | PAT MAINO | |
| | | (734) 794-3304 | |
| FORESTRY | | MATT WALDSMITH (734) 794-3321 | |
| SIGNS SIGNALS | | CHUCK FOJTIK | |
| STREET LIGHTS | | (734) 794-6361 | |

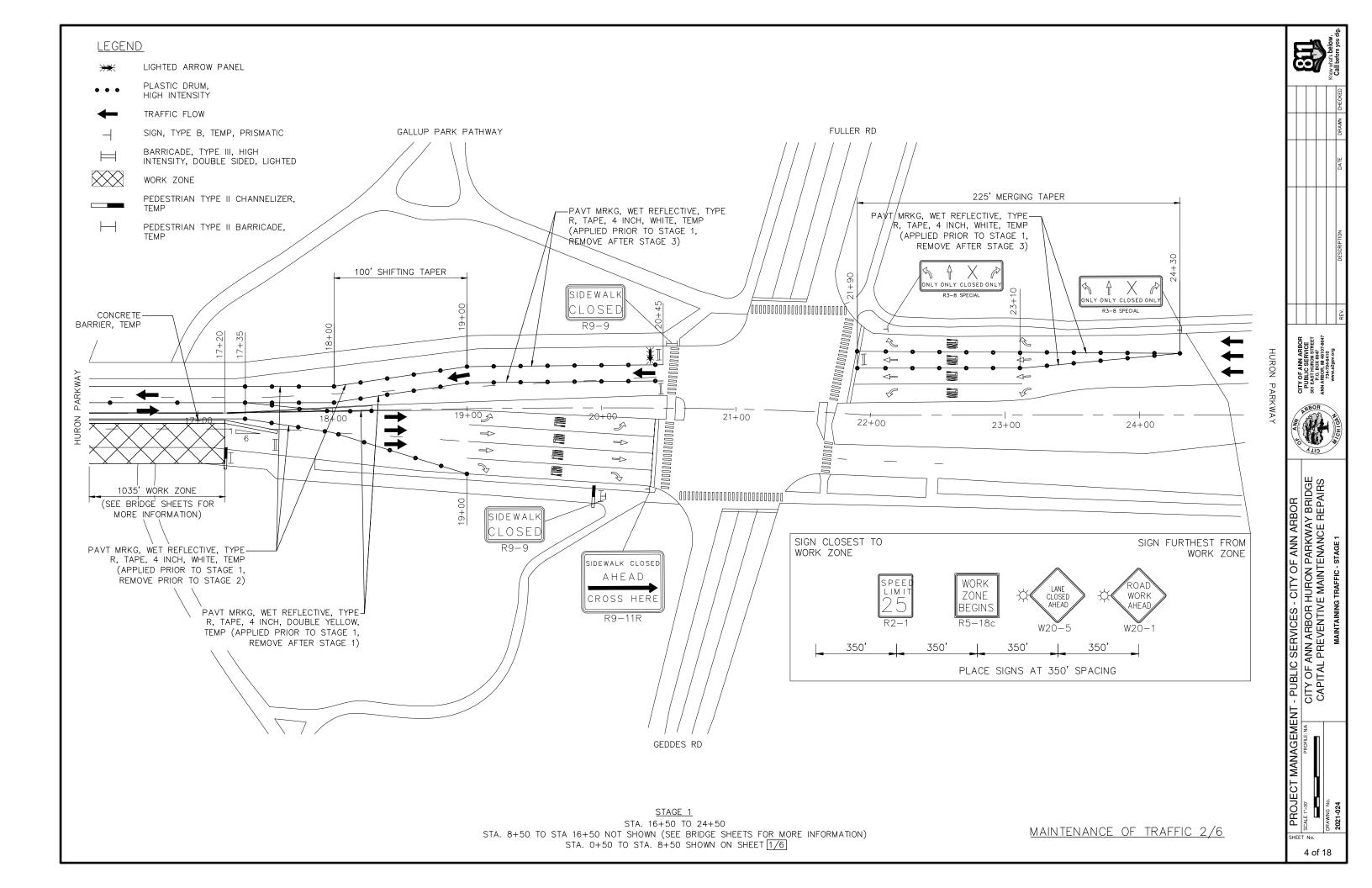
| | SHEET INDEX | | |
|-----------------|------------------------------------|--|--|
| SHEET NUMBER | SHEET TITLE | | |
| 1 | TITLE SHEET | | |
| 2 | PROJECT INFORMATION | | |
| | HURON PARKWAY OVER HURON RIVER | | |
| 3-8 | MAINTENANCE OF TRAFFIC | | |
| 9 | PAVEMENT MARKING | | |
| 10 | CONSTRUCTION STAGING DETAILS | | |
| 11 | GENERAL PLAN OF STRUCTURE | | |
| 12-14 | EXISTING GENERAL PLAN OF STRUCTURE | | |
| 15 | SUBSTRUCTURE REPAIR DETAILS | | |
| 16 | DECK DELAMINATION SURVEY | | |
| 17 | SIDEWALK REHABILITATION DETAILS | | |
| 18 | RAILING REHAB DETAIL | | |

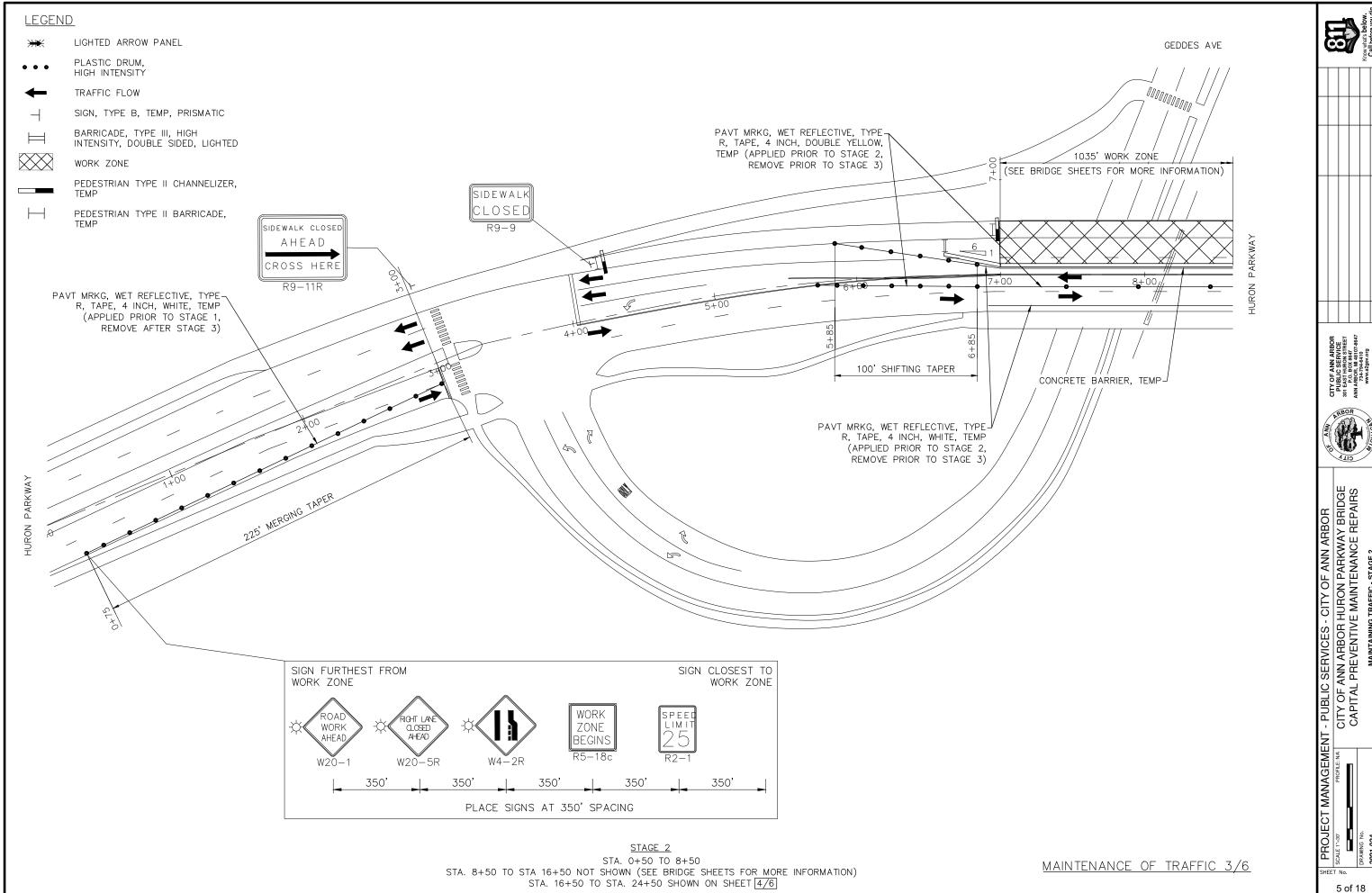
| MAINTAINING TRAFFIC QUAN | TITIES | 3 |
|---|--------|----------|
| Item Description | Unit | Quantity |
| Barricades, Type III, High Intensity, Double Sided, Lighted, Furn | Ea | 6 |
| Barricades, Type III, High Intensity, Double Sided, Lighted, Oper | Ea | 6 |
| Conc Barrier Ending, Temp, Detail 2, Adj | Ea | 4 |
| Conc Barrier Ending, Temp, Detail 2, Furn | Ea | 4 |
| Conc Barrier Ending, Temp, Detail 2, Oper | Ea | 4 |
| Conc Barrier, Temp, Adj | Ft | 2550 |
| Conc Barrier, Temp, Furn | Ft | 2240 |
| Conc Barrier, Temp, Oper | Ft | 2240 |
| Pedestrian Type II Barricade, Temp | Ea | 10 |
| Pedestrian Type II Channelizer, Temp | Ft | 96 |
| Lighted Arrow, Type C, Furn | Ea | 2 |
| Lighted Arrow, Type C, Oper | Ea | 2 |
| Minor Traf Devices, Max. | LS | 1 |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp | Ft | 5910 |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp | Ft | 12680 |
| Plastic Drum, High Intensity, Furn | Ea | 143 |
| Plastic Drum, High Intensity, Oper | Ea | 143 |
| Sign, Type B, Temp, Prismatic, Furn | Sft | 88 |
| Sign, Type B, Temp, Prismatic, Oper | Sft | 88 |
| Sign, Type B, Temp, Prismatic, Special, Furn | Sft | 12 |
| Sign, Type B, Temp, Prismatic, Special, Oper | Sft | 12 |
| Traffic Regulator Control | LS | 1 |

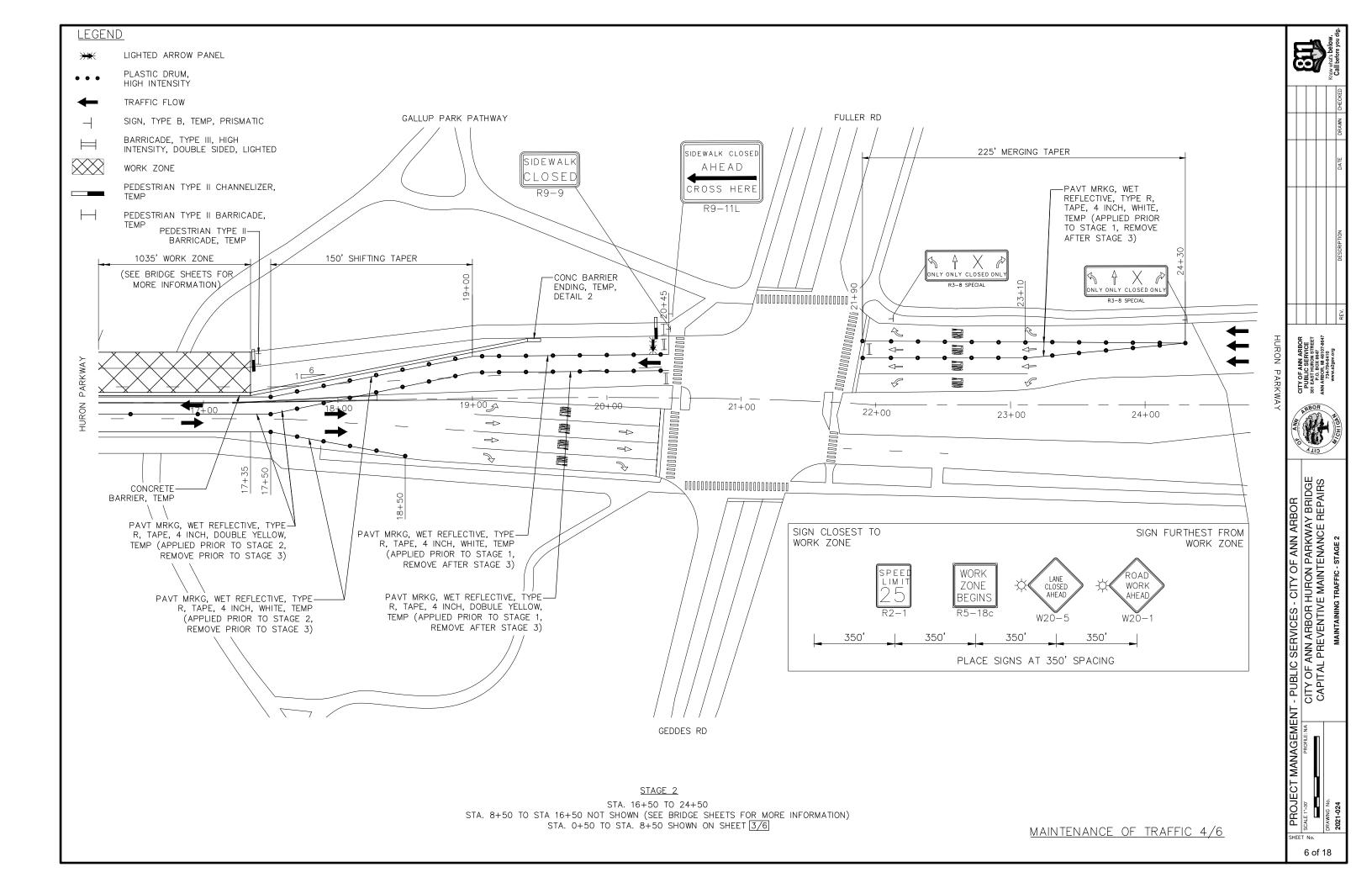


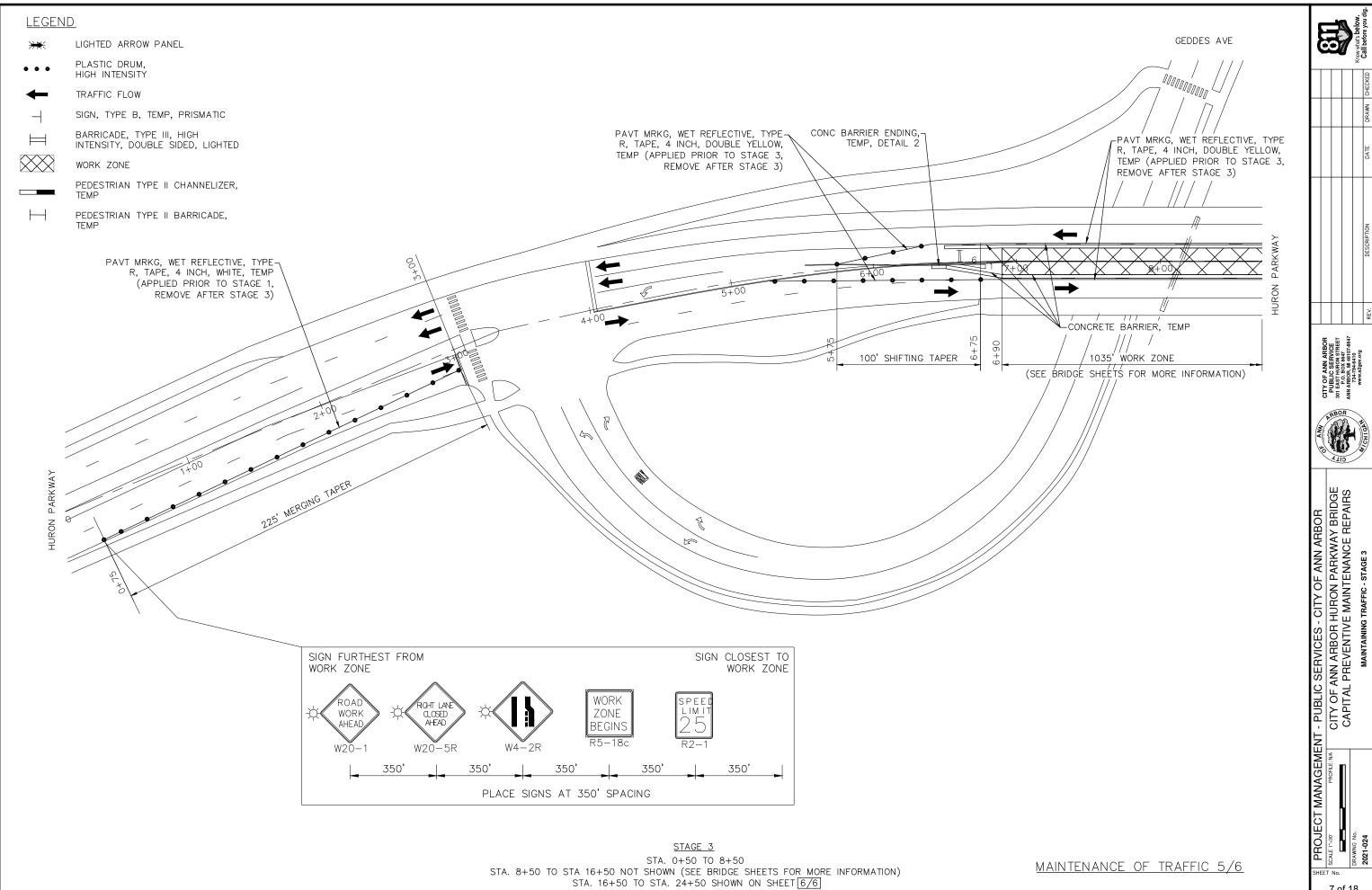
CITY OF ANN ARBOR HURON PARKWAY BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
PROJECT INFORMATION AND NOTE SHEET

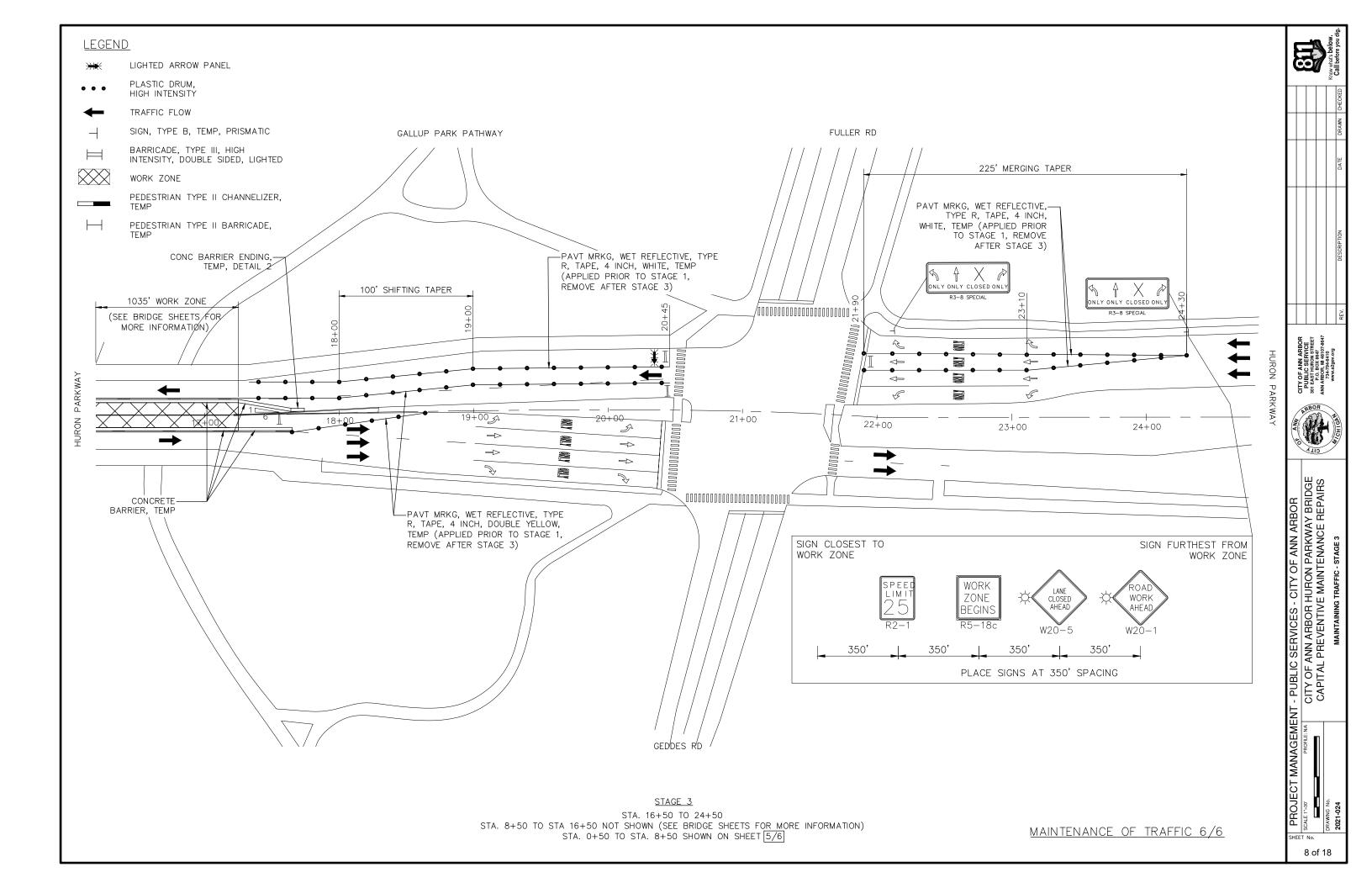


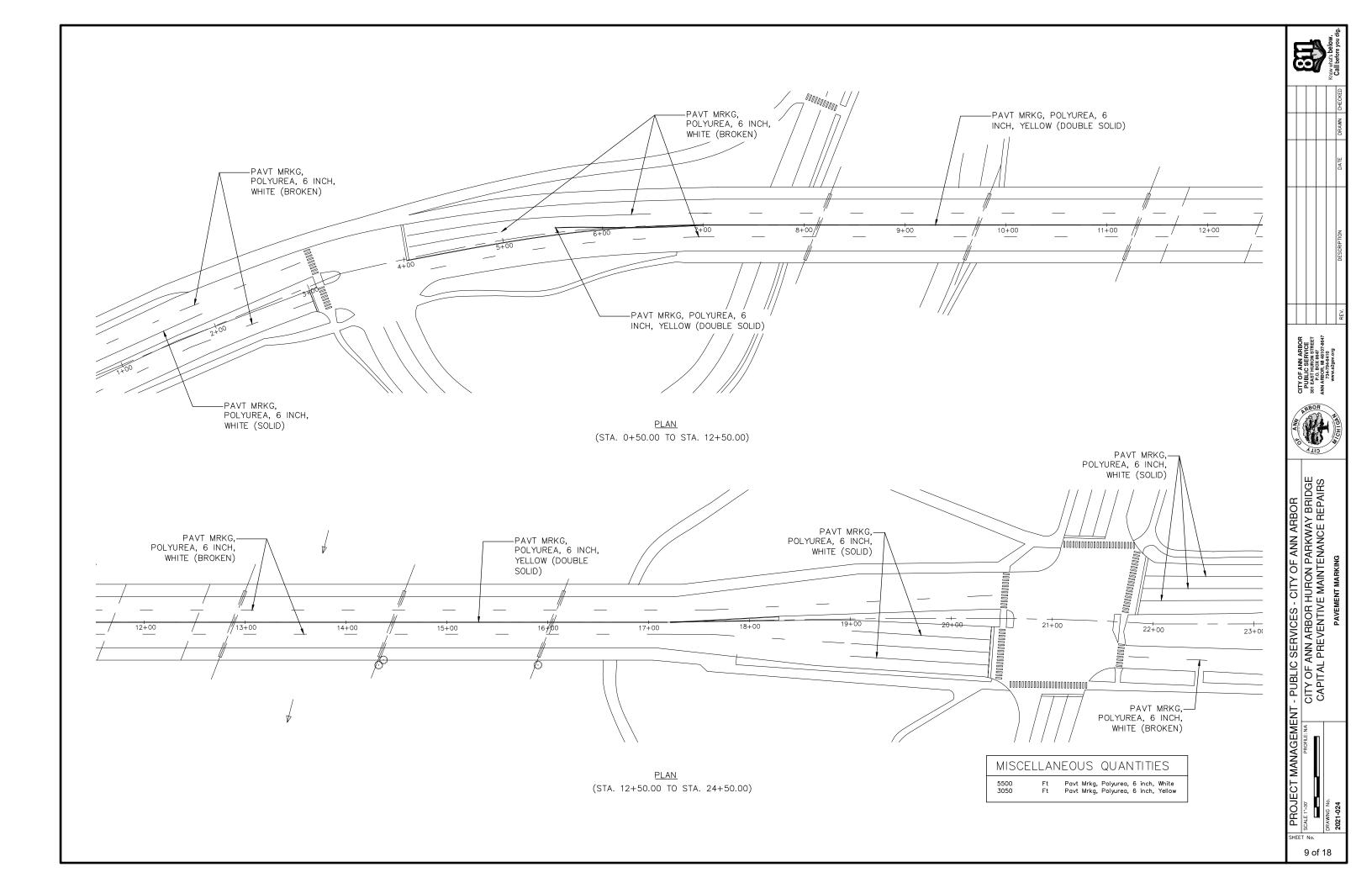


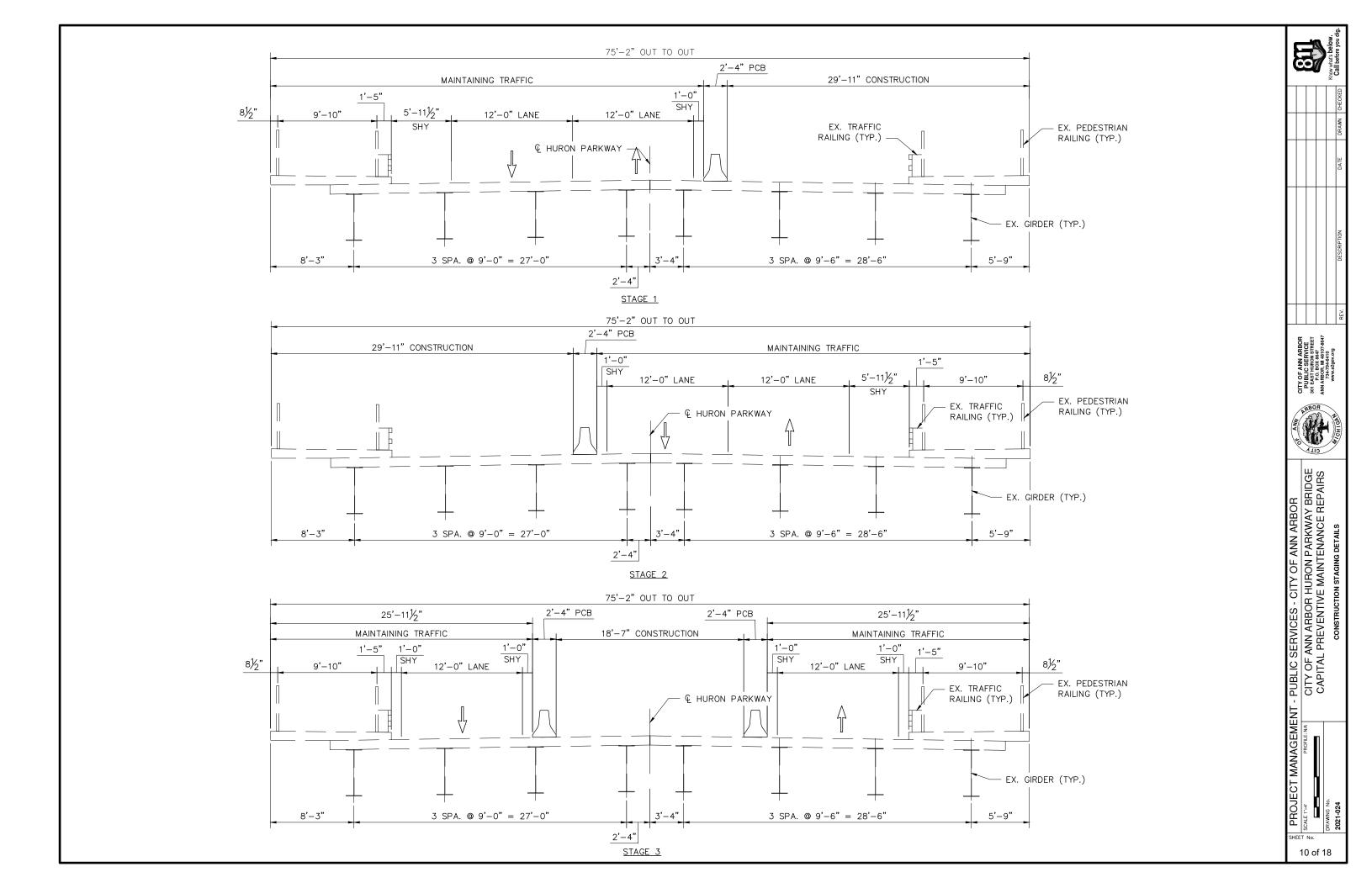


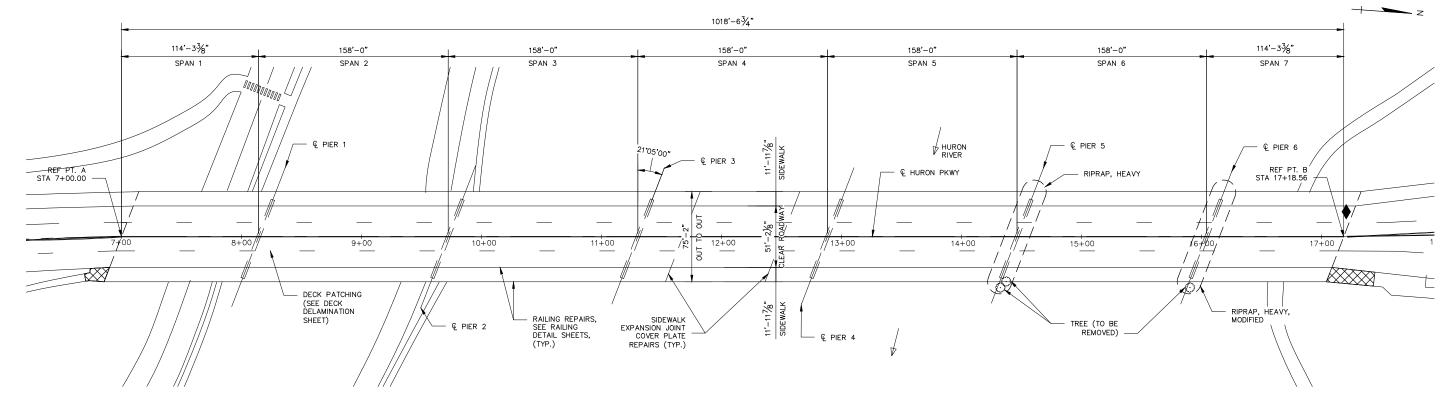












PLAN





REMOVE AND REPLACE APPROACH SIDEWALK PORTIONS AS DIRECTED BY THE

REMOVE AND REPLACE SLOPE PROTECTION PORTIONS AS DIRECTED BY THE ENGINEER

MISCELLANEOUS QUANTITIES

Tree, Rem, 6 inch to 18 inch Stump, Chemically—treated, Up to 18 inch Sidewalk, Rem Sidewalk, Concrete, 6 inch, Special Riprap, Heavy, Modified Slope Protection, Replace

NOTES:

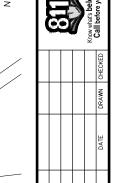
20 180 45

THE WORK COVERED BY THESE PLANS INCLUDES DECK PATCHING, REPAIR OF GALVANIZED COATING ON BRIDGE RAILINGS, TREE REMOVAL, SIDEWALK EXPANSION JOINT REPAIRS, SUBSTRUCTURE REPAIRS, SIDEWALK REPAIRS, AND MAINTAINING TRAFFIC.

THE REHABILITATION DESIGN OF THIS STRUCTURE IS BASED ON THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE ORIGINAL STRUCTURE WAS DESIGNED FOR UNKNOWN LOADING.

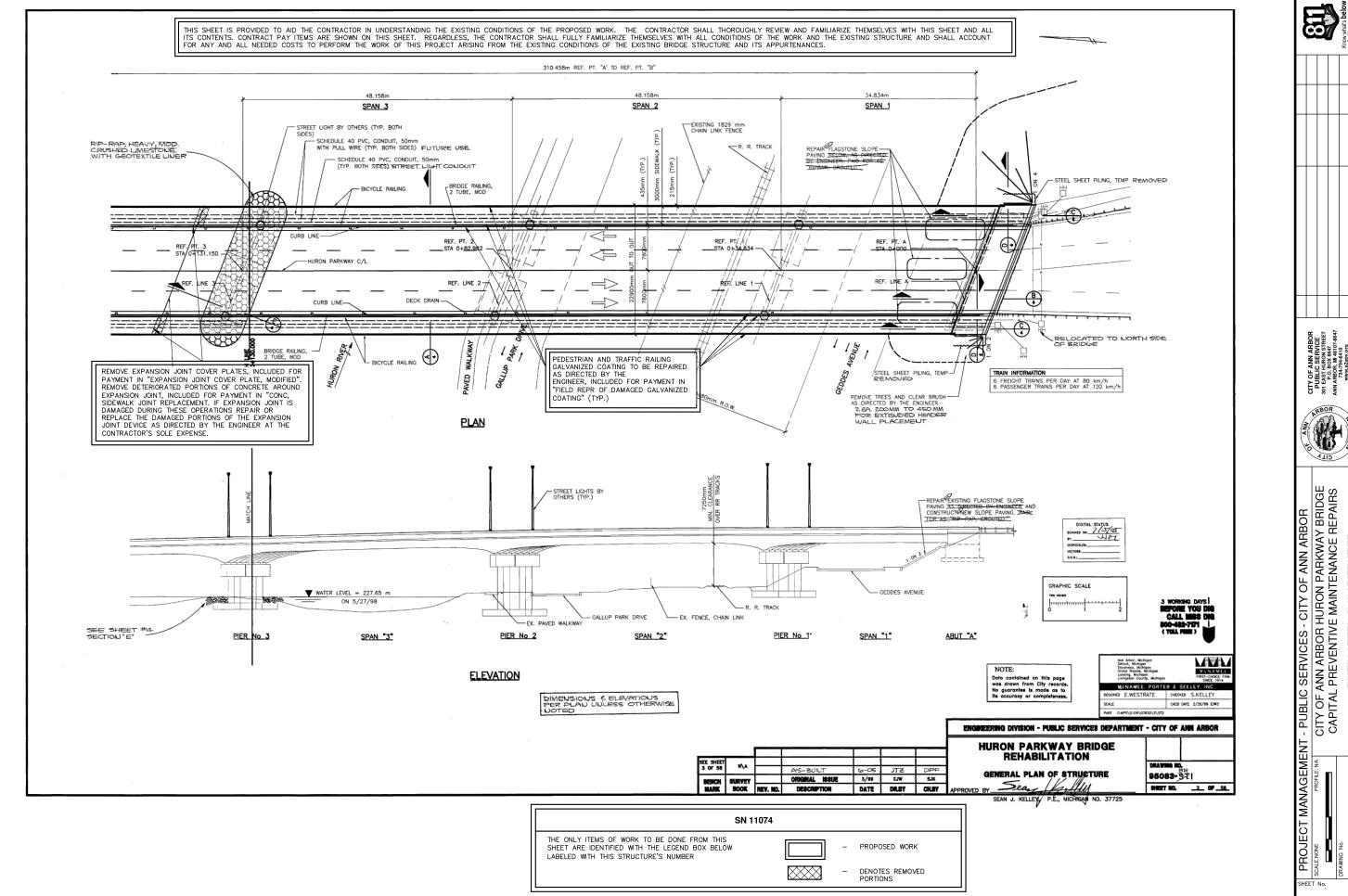
THE RIPRAP QUANTITY IS BASED ON THE LATERAL DIMENSIONS OF THE AREA TO BE PROTECTED, REGARDLESS OF THE NUMBER OF LAYERS REQUIRED. THE ESTIMATED WEIGHT OF RIPRAP IS 67 TONS.

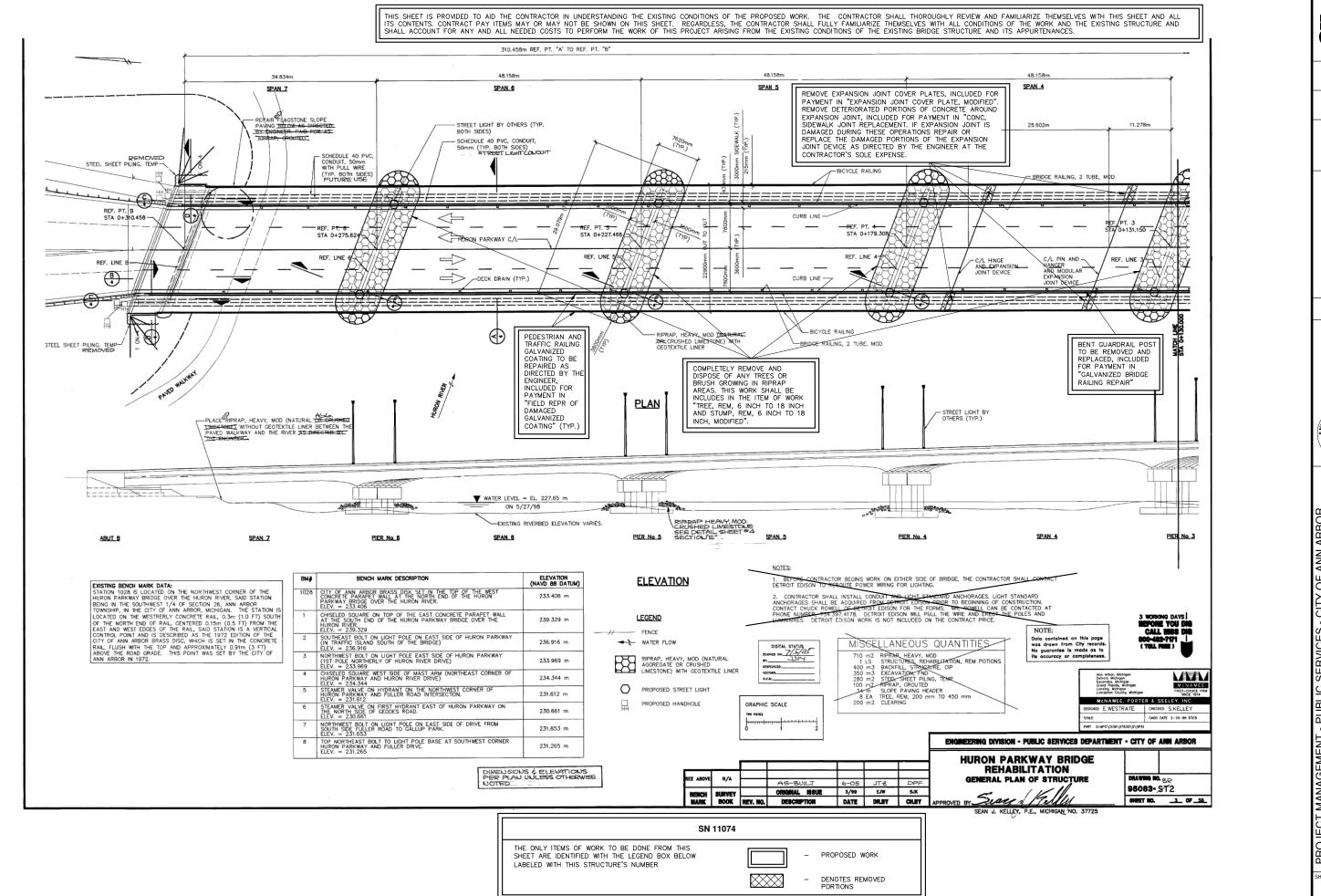
COMPLETELY REMOVE AND DISPOSE OF ANY TREES OR BRUSH GROWING IN RIPRAP AREAS. THIS WORK SHALL BE INCLUDES IN THE ITEM OF WORK "TREE, REM, 6 INCH TO 18 INCH AND STUMP, CHEMICALLY—TREATED, UP TO 18 INCH".





- PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR HURON PARKWAY BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS

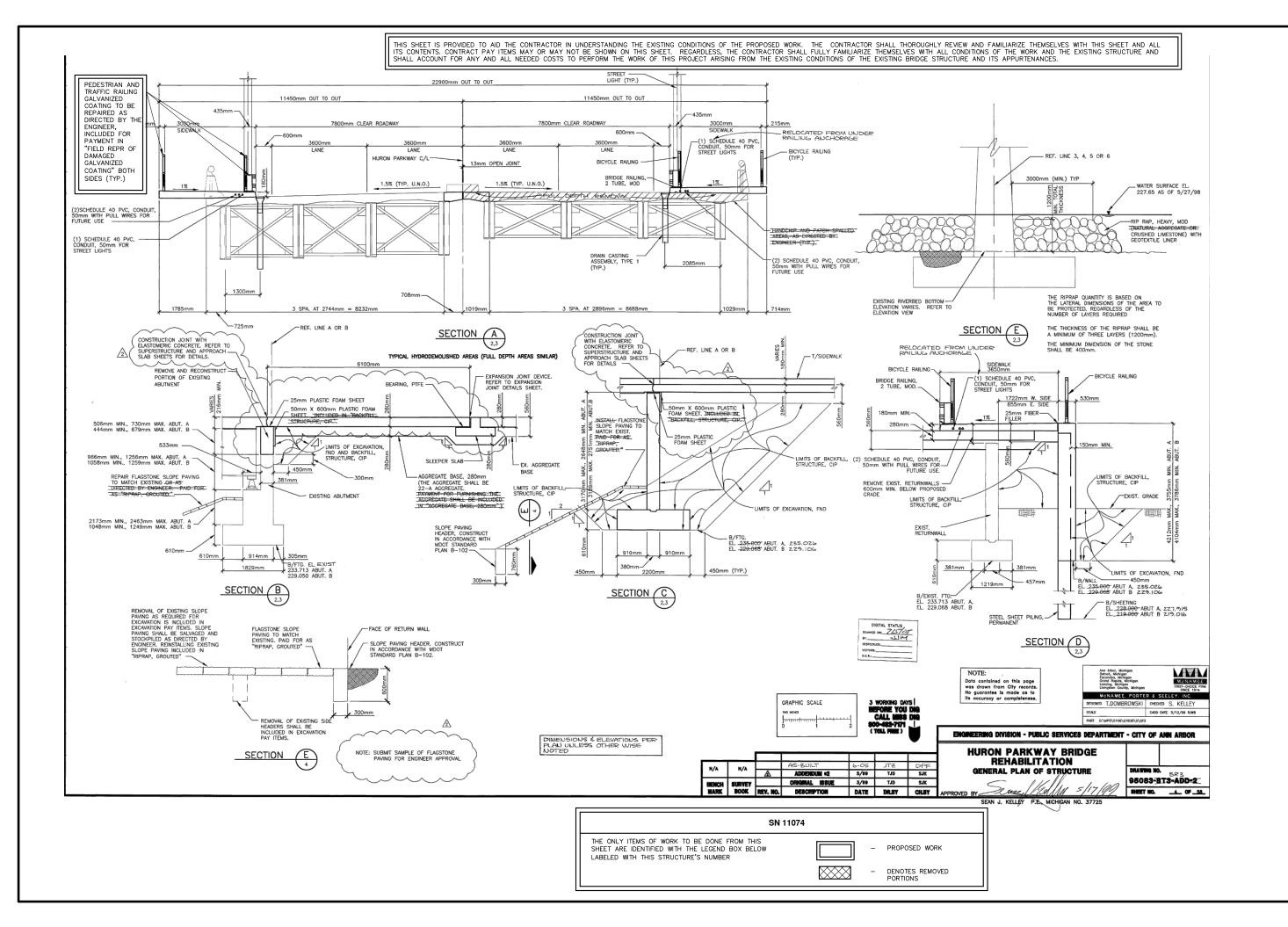






- PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR HURON PARKWAY BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS

PROJECT MANAGEMENT

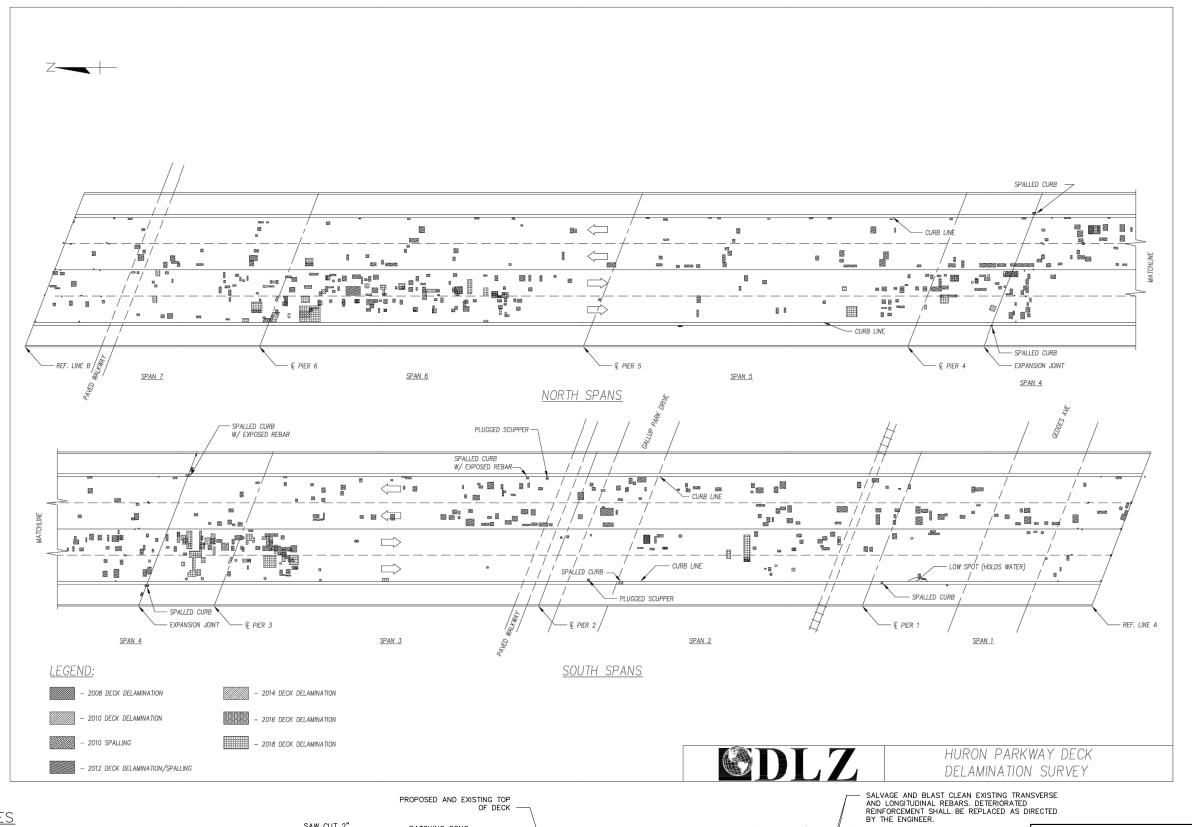


CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, M 48107-8647 734794-6410 www.a2gov.org



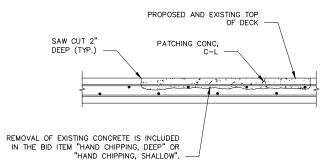
- PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR HURON PARKWAY BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS

PROJECT MANAGEMENT



<u>NOTES</u>

THE CONTRACTOR IS RESPONSIBLE TO WET CURE ALL LATEX MODIFIED PATCHES PLACED ON THIS PROJECT FOR A PERIOD OF SEVEN CALENDAR DAYS IN ACCORDANCE WITH SECTION 712.03.P AND AS DETAILED HEREIN. THE CONTRACTOR SHALL ENSURE THAT THE BURLAP REMAINS WET FOR THE ENTIRE DURATION OF THE CURING PERIOD. THE POLYETHYLENE FILM COVERING THE PATCHES SHALL BE SECURELY AFFIXED TO EACH PATCH. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "PATCHING CONC, C-L".



PARTIAL DECK SECTION



| | | BY THE E |
|---------------------------|----------|----------|
| EXISTING DECK | \ | |
| | | |
| | | |
| | | |
| SAW CUT 2" DEEP (TYP.) | | |
| | | |

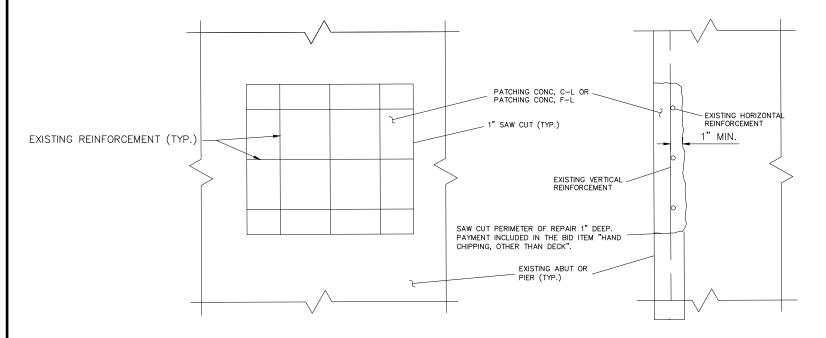
PLAN - DECK PATCHING REPAIR

MISCELLANEOUS QUANTITIES

| 150 50 | Lb Syd | **Reinforcement, Steel, Epoxy Coated Hand Chipping, Shallow |
|-----------|-----------|--|
| 50 | Syd | Hand Chipping, Deep |
| 7 | Cyd | Patch, Full Depth |
| 12 | Cyd | Patching Conc, C—L |

STEEL REINFORCEMENT NEEDED TO REPLACE WEAKENED REINFORCEMENT FOUND DURING CONCRETE REPAIRS

- PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR HURON PARKWAY BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS



ELEVATION

SECTION

SUBSTRUCTURE PATCHING DETAIL

REMOVE UNSOUND CONCRETE, EXPOSE EXISTING REINFORCEMENT, REPLACE/CLEAN CORRODED REINFORCEMENT, PER ENGINEER.

MISCELLANEOUS QUANTITIES

| | 111110 | 0EEE/111E000 Q0/111111E0 |
|-----|--------|--------------------------------------|
| 100 | Lb | **Reinforcement, Steel, Epoxy Coated |
| 130 | Cft | *Hand Chipping, Other Than Deck |
| 5 | Cyd | *Patching Conc, C—L |
| 2 | Cyd | *Patching Conc, F—L |
| 50 | Sft | *Patch, Forming |

FOR SUBSTRUCTURE REPAIRS AS DIRECTED BY THE ENGINEER STEEL REINFORCEMENT NEEDED TO REPLACE WEAKENED REINFORCEMENT FOUND DURING CONCRETE REPAIRS

SUBSTRUCTURE REPAIR NOTES:

QUANTITIES INCLUDE REPAIRS TO PIERS AND ABUTMENTS. CONCRETE REPAIR QUANTITIES ARE ESTIMATED AND BASED ON EXISTING CONDITIONS DETERMINED BY A FIELD SURVEY RECORDED IN THE INSPECTION REPORT AND DATED NOVEMBER, 2018.

SUBSTRUCTURE UNITS SHALL BE SOUNDED PRIOR TO CONSTRUCTION AND SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER.

FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103 SERIES.

FORMS FOR LARGE PATCHES SHALL BE INSTALLED IN 2'-0" TO 4'-0" HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4'-0" ABOVE THE LEVEL OF CONCRETE AS THE POUR PROGRESSES.

LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J, OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE ITEM "PATCHING CONC, C-L" OR "PATCHING CONC, F-L".

| , | , | | Š | ا ڏ |
|----|-----|-----|---|---------------|
| | | | | DRAWN CHECKED |
| | | | | DRAWN |
| | | | | DATE |
| | | | | DESCRIPTION |
| | | | | REV. |
| Œ. | . 6 | 647 | | |

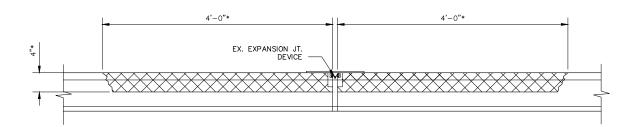


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

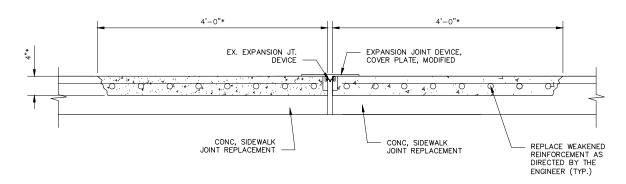
SCALE 17-40*

CITY OF ANN ARBOR HURON PARKWAY BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
2021-024

SUBSTRUCTURE REPAIR DETAILS

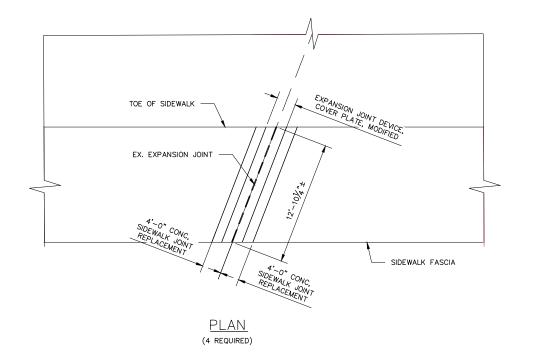


EXISTING SECTION THROUGH SIDEWALK



PROPOSED SECTION THROUGH SIDEWALK

st DIMENSIONS GIVEN ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER



| | MISCELLANEOUS QUANTITIES |
|----------------------|---|
| 500 13 52 6 | Lb **Reinforcement, Steel, Epoxy Coated Ft Expansion Joint Cover Plate Ft Expansion Joint Device, Cover Plate, Modified Cyd *Conc, Sidewalk Joint Replacement |

- STEEL REINFORCEMENT NEEDED TO REPLACE WEAKENED REINFORCEMENT FOUND DURING CONCRETE REPAIRS
- FOR USE AS DIRECTED BY THE ENGINEER

NOTES:

THE EXPANSION JOINT COVER PLATE OVER THE WEST SIDEWALK AT THE SOUTH EXPANSION JOINT IS DAMAGED. THIS COVER PLATE SHALL BE REPLACED. THE NEW COVER PLATE SHALL BE INCLUDED FOR PAYMENT IN "EXPANSION JOINT, COVER PLATE". THE OTHER THREE EXPANSION JOINT COVER PLATES SHALL BE SALVAGED. ALL FOUR EXPANSION JOINT COVER PLATES SHALL HAVE SLIP—RESISTANT COATING APPLIED BEFORE BEING REINSTALLED, INCLUDED FOR PAYMENT IN "EXPANSION JOINT, COVER PLATE, MODIFIED".



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

CITY OF ANN ARBOR HURON PARKWAY BRIDGE

CAPITAL PREVENTIVE MAINTENANCE REPAIRS

1021-024

SIDEWALK REHABILITATION DETAILS

