

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES OR STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ALL FITTINGS USED FOR WATER MAIN INSTALLATION SHALL BE DUCTILE CAST IRON IN ACCORDANCE WITH AWWA C-110. STAINLESS STEEL OR COR-TEN BOLTS ARE TO BE USED ON ALL WATER MAIN FITTINGS. ALL JOINTS SHALL BE MEGA-LUG CLAMPS. MATERIAL SHALL BE INCIDENTAL AND PAID FOR ON THE SPECIFIC BID ITEM.

ALL DUCTILE IRON PIPE, FITTINGS, AND HYDRANT LEADS SHALL BE ENCASED IN 6 MIL POLYETHYLENE. POLYETHYLENE SHALL BE TAPED AT INTERVALS SUFFICIENT TO PREVENT SOIL FROM CONTACTING PIPE. MATERIAL SHALL BE INCIDENTAL TO THE PIPE AND FITTINGS PAID FOR ON SPECIFIC BID ITEMS.

ALL WATER MAIN SHALL BE DISINFECTED, TESTED, AND FLUSHED ACCORDING TO THE STANDARD SPECIFICATIONS. TESTING AND DISINFECTING SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PIPE AND SHALL NOT BE PAID FOR SEPARATELY. REPEATING TESTING NECESSARY TO OBTAIN A CONFORMING TEST SHALL NOT BE CONSIDERED JUSTIFICATION FOR ANY EXTRA EXPENSE, CHANGE ORDER, OR CONTRACT TIME DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL TESTS WITHIN NORMAL WORKING HOURS, AND NO HYDROSTATIC PRESSURE TEST SHALL BE STARTED AFTER 4:00 PM.

HMA PAVEMENT WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

5.0" DEPTH 3.0" OF HMA PAVEMENT 3MT 58-28 S, AS THE LOWER LAYER
2.0" OF HMA PAVEMENT 4MT 58-28 S, AS THE UPPER LAYER

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.

SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

ASPHALT AND CONCRETE DRIVEWAYS SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

DISTANCE BEHIND CURB TO UTILITY POLES MAY REQUIRE CONCRETE CURB AND GUTTER TO BE HAND FORMED RATHER THAN SLIP FORMED. THIS WILL BE INCIDENTAL TO THE ITEM.

STANDARD ABBREVIATIONS

| | |
|--------|--|
| AEW | APRON END WALL |
| AGG | AGGREGATE |
| BAD | BASE AGGREGATE DENSE |
| BM | BENCH MARK |
| C&G | CURB AND GUTTER |
| C/L | CENTER OR CONSTRUCTION LINE |
| CONC | CONCRETE |
| CP | CULVERT PIPE |
| CPCM | CULVERT PIPE CORRUGATED METAL |
| CPRC | CULVERT PIPE REINFORCED CONCRETE |
| CPRCHE | CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL |
| CSCP | CORRUGATED STEEL CULVERT PIPE |
| CSPA | CORRUGATED STEEL PIPE ARCH |
| CSD | CONCRETE SURFACE DRAIN |
| CY | CUBIC-YARD |
| D | DEGREE OF CURVE |
| Δ | DELTA |
| DISCH | DISCHARGE |
| FE | FIELD ENTRANCE |
| HERCP | HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE |
| HMA | HOT MIX ASPHALT |
| INV | INVERT |
| L | LENGTH OF CURVE |
| LHF | LEFT HAND FORWARD |
| LT | LEFT |
| MIN | MINIMUM |
| M/L | MATCHLINE |
| NB | NORTHBOUND |
| NC | NORMAL CROWN |
| NTS | NOT TO SCALE |
| PAVT | PAVEMENT |
| PB | PULL BOX |
| PC | POINT-OF-CURVE |
| PCC | POINT OF COMPOUND CURVE |
| PE | PRIVATE ENTRANCE |
| PI | POINT OF INTERSECTION |
| PLE | PERMANENT LIMITED EASEMENT |
| PT | POINT OF TANGENT |
| PVC | POINT OF VERTICAL CURVE |
| PVI | POINT OF VERTICAL INTERSECTION |
| PVT | POINT OF VERTICAL TANGENT |
| R | RADIUS OF CURVE |
| R/L | REFERENCE LINE |
| R/W | RIGHT OF WAY |
| RAD | RADIUS |
| RC | REVERSE CROWN |
| RCAEW | APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE |
| RCHES | REINFORCED CONCRETE HORIZONTAL ELLIPTICAL STORM SEWER |
| RCPS | REINFORCED CONCRETE PIPE - STORM SEWER |
| REQD | REQUIRED |
| RHF | RIGHT HAND FORWARD |
| RO | RUN OFF LENGTH |
| RT | RIGHT |
| SALV | SALVAGED |
| SB | SIGNAL BASE |
| SDD | STANDARD DETAIL DRAWING |
| SE | SUPER ELEVATION |
| SF | SQUARE FOOT |
| STA | STATION |
| SY | SQUARE YARD |
| T | TANGENT LENGTH |
| TC | TOP OF CURB |
| TLE | TEMPORARY LIMITED EASEMENT |

VILLAGE CONTACT

VILLAGE OF BELLEVILLE
TIM FRANCOIS
20 RIVER ST.
PO BOX 79
BELLEVILLE, WI 53508
(608) 424-3666
TFRANCOIS@VILLAGEOFBELLEVILLE.COM

DEPT. OF NATURAL RESOURCES

WISCONSIN DEPT. OF NATURAL RESOURCES
ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3301
ERIC.HEGGELUND@WISCONSIN.GOV

WISDOT CONTACT

WISCONSIN DEPT OF TRANSPORTATION, SW REGION
MAHESH SHRESTHA
2101 WRIGHT STREET
MADISON, WI 53704
(608) 245-2674
MAHESH.SHRESTHA@DOT.WI.GOV

DESIGN CONTACT

MSA PROFESSIONAL SERVICES
KEVIN LORD
2901 INTERNATIONAL LANE, SUITE 300
MADISON, WI 53704
(608) 242-7779
KLORD@MSA-PS.COM

SECTION 2 ORDER OF SHEETS

GENERAL NOTES
PROJECT OVERVIEW
REMOVALS AND EROSION CONTROL
WATER MAIN PLAN
TYPICALS AND PAVEMENT MARKING
CONSTRUCTION DETAILS
TRAFFIC CONTROL/DETOUR
ALIGNMENT PLAN

UTILITIES

COMMUNICATION LINE
CHARTER COMMUNICATIONS
BRANDON STORM
2701 DANIELS ST.
MADISON, WI 53718
(608) 274-3822
BRANDON.STORM@CHARTERCOM.COM

COMMUNICATION LINE
FRONTIER COMMUNICATIONS OF WI LLC.
ROBERT CHURCH
2222 WEST WISCONSIN ST.
PORTAGE, WI 53901
(608) 742-1817
ROBERT.CHURCH@FTR.COM

ELECTRICITY
ALLIANT ENERGY
JASON HOGAN
4902 N BILTMORE LN.
SUITE 1000
MADISON, WI 53718
(608) 458-4871
JASONHOGAN@ALLIANTENERGY.COM

GAS
WE ENERGIES
LATROY BRUMFIELD
333 WEST EVERETT ST.
ROOM A299
MILWAUKEE, WI 53203
(414) 221-5617
LATROY.BRUMFIELD@WE-ENERGIES.COM

WATER/SANITARY
VILLAGE OF BELLEVILLE
TIM FRANCOIS
20 RIVER ST.
PO BOX 79
BELLEVILLE, WI 53508
(608) 424-3666
TFRANCOIS@VILLAGEOFBELLEVILLE.COM

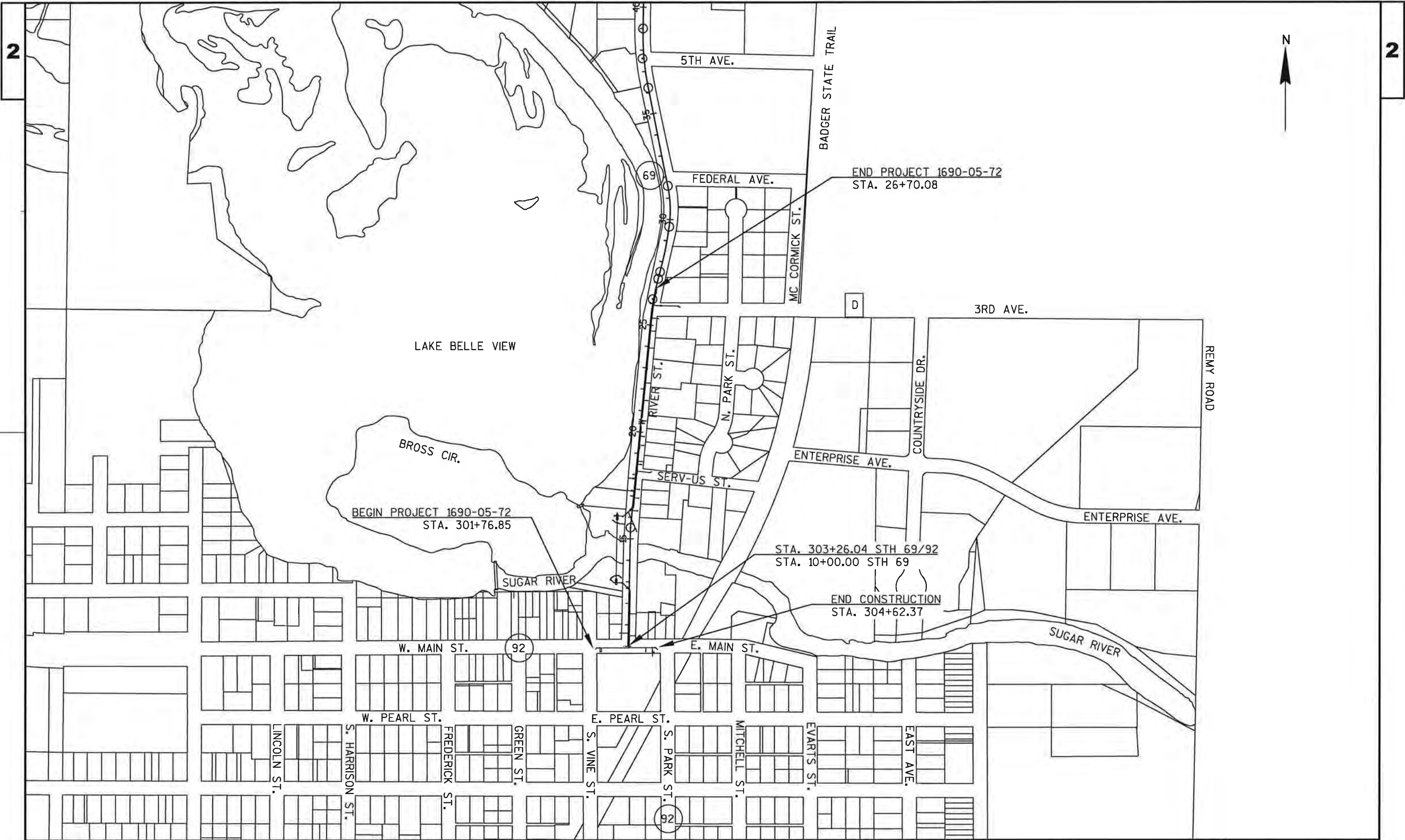
GENERAL NOTES

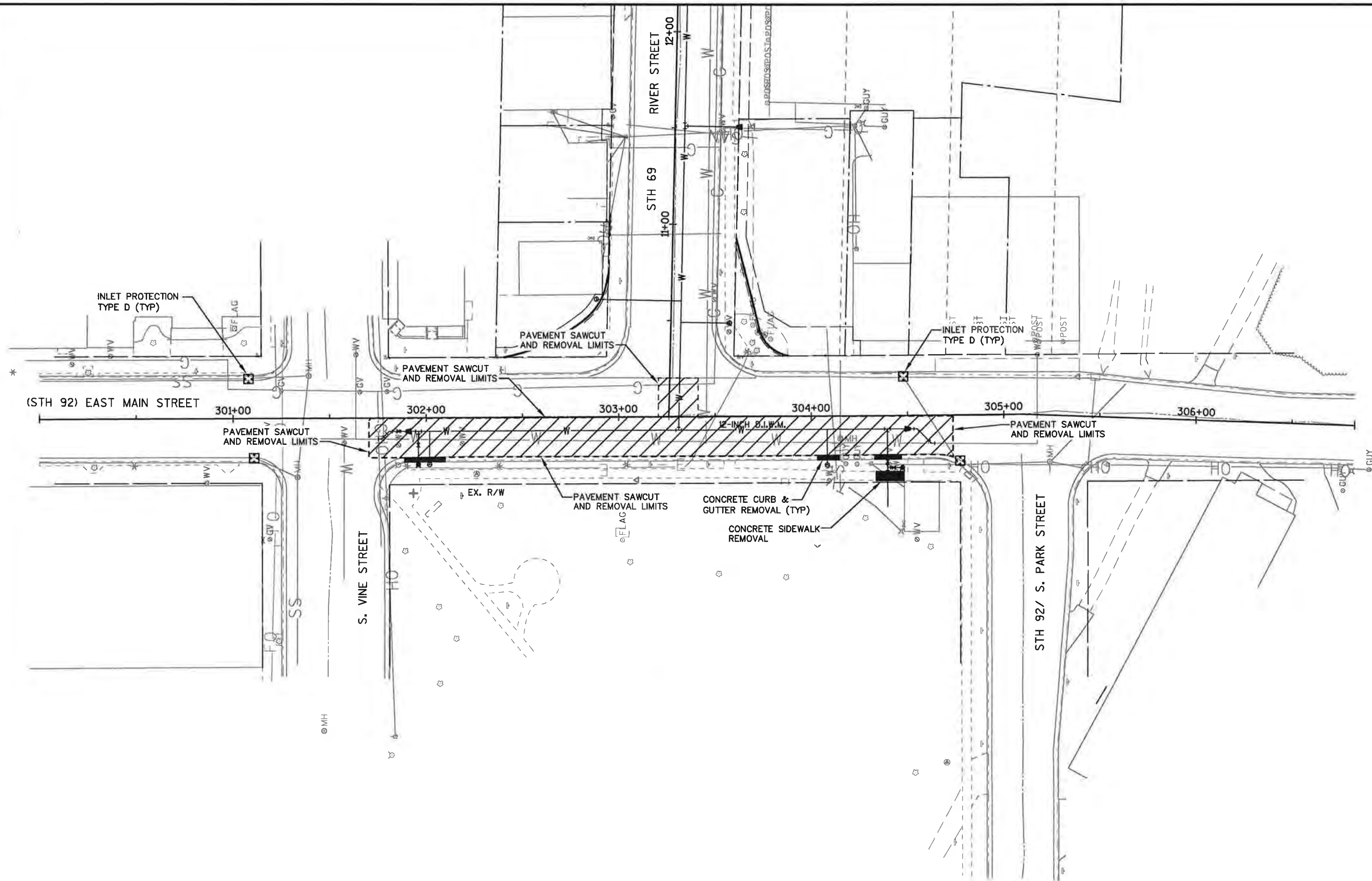
WHERE MENTIONED ELSEWHERE IN THE SPECIFICATIONS OR PLANS, THE "STANDARD SPECIFICATION" SHALL REFER TO THE LATEST EDITION OF THE STATE OF WISCONSIN: "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION," AND THE LATEST AMENDMENTS (STATE SPECIFICATIONS) AND THE "VILLAGE OF BELLEVILLE STANDARD SPECIFICATIONS FOR PUBLIC WORKS IMPROVEMENTS" LAST REVISED IN APRIL 2007, (VILLAGE SPECIFICATIONS). IN INSTANCES WHERE THE STATE AND VILLAGE SPECIFICATION CONFLICT, THE STATE SPECIFICATION SHALL SUPERSEDE.

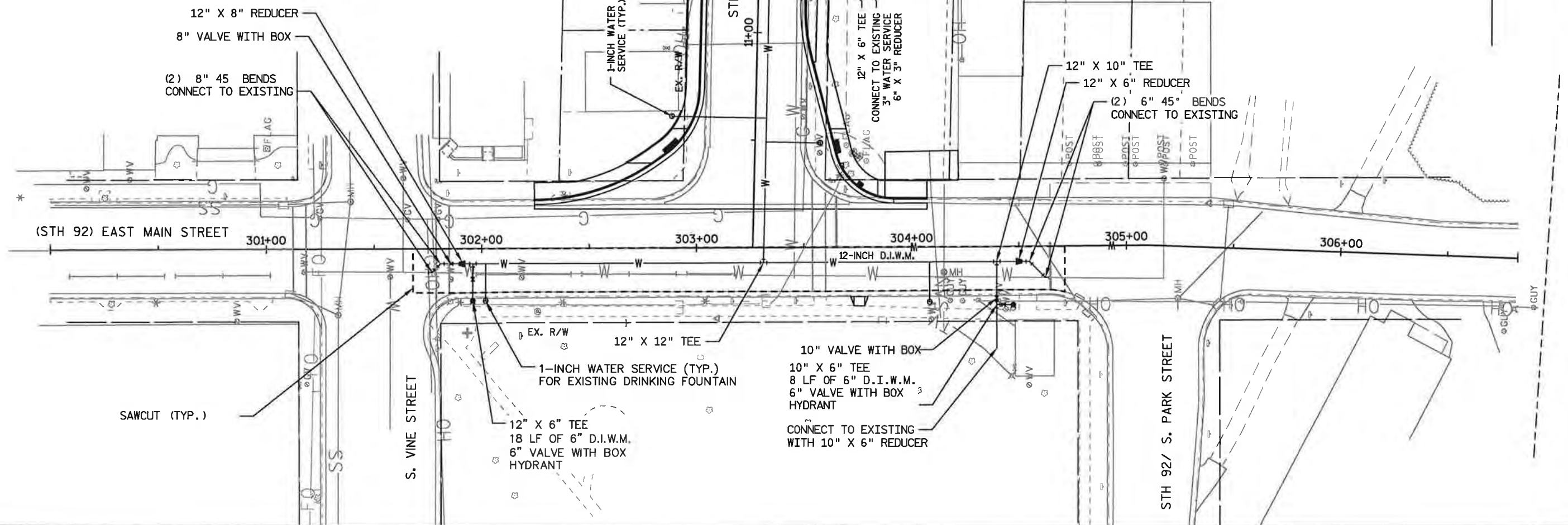


Dial 811 or (800) 242-8511

www.DiggersHotline.com







865

865

860

860

855

855

850

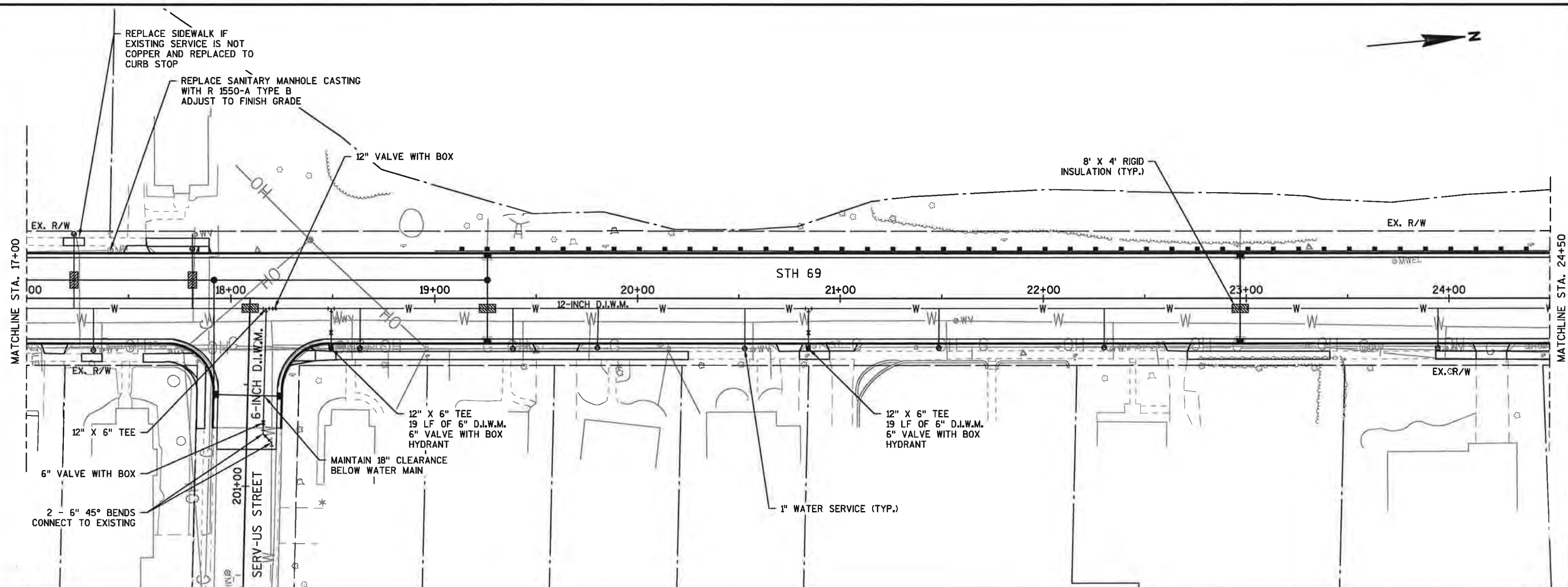
850

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION, ELEVATION, SIZE & MATERIAL OF EXISTING WATERMAIN AND SERVICES PRIOR TO CONNECTIONS.
2. WATERMAIN CONSTRUCTION SHALL ADHERE TO "VILLAGE OF BELLEVILLE - STANDARD SPECIFICATIONS FOR PUBLIC WORKS IMPROVEMENTS"

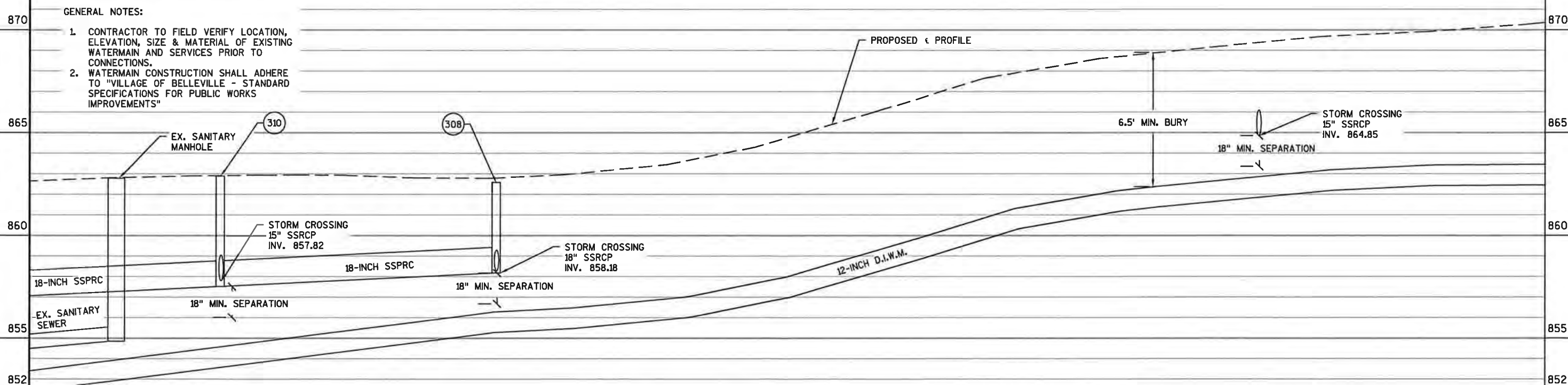
2

2



GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION, ELEVATION, SIZE & MATERIAL OF EXISTING WATERMAIN AND SERVICES PRIOR TO CONNECTIONS.
2. WATERMAIN CONSTRUCTION SHALL ADHERE TO "VILLAGE OF BELLEVILLE - STANDARD SPECIFICATIONS FOR PUBLIC WORKS IMPROVEMENTS"



PROJECT NO:1690-05-72

HWY: STH 69

COUNTY: DANE

WATER MAIN PLAN & PROFILE

SHEET

E

FILE NAME : P:\3705\372\00372060\CADD\C3D\DESIGN MSA UTILITY.DWG
LAYOUT NAME - 022502_SS

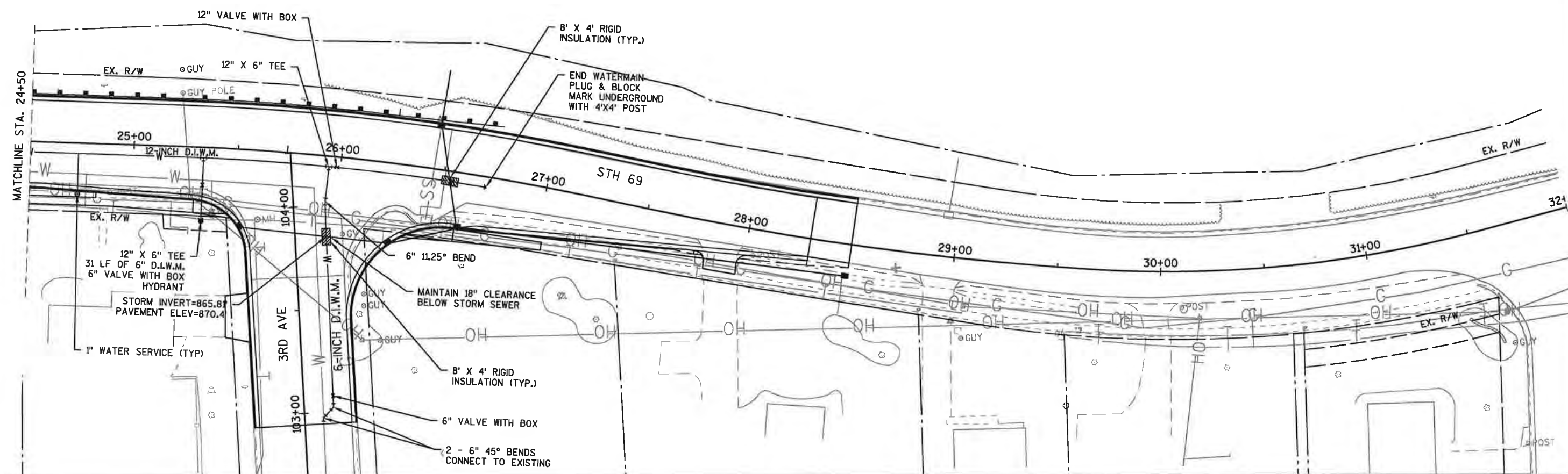
PLOT DATE : 9/30/2016 2:46 PM

PLOT BY : KEVIN LORD

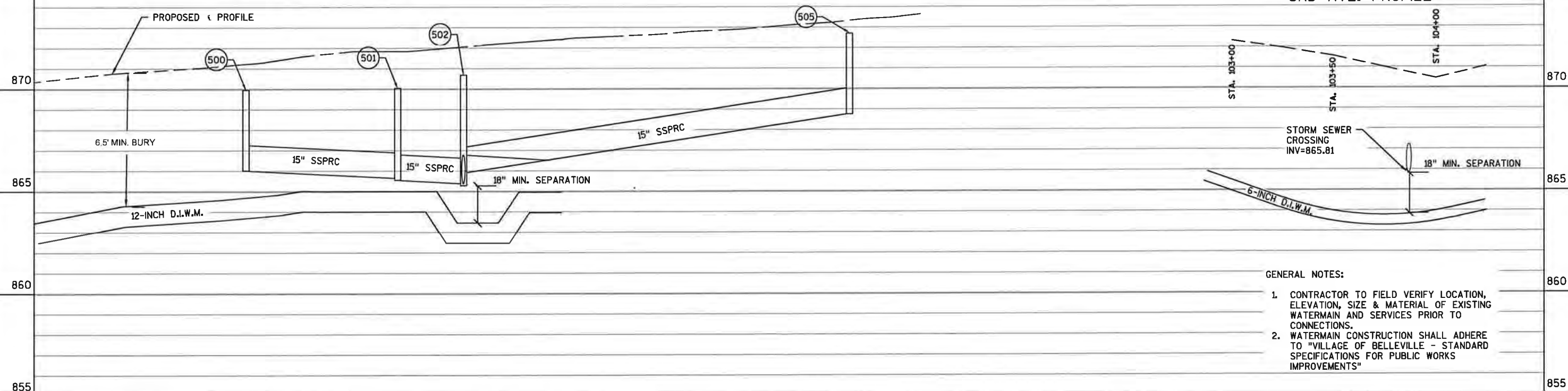
PLOT NAME :

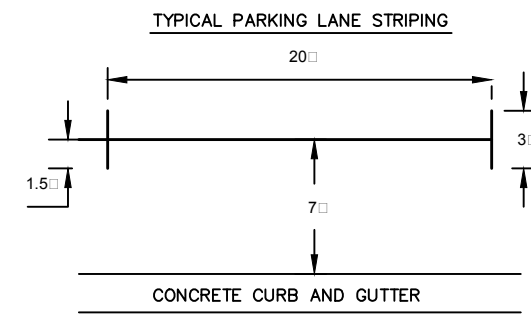
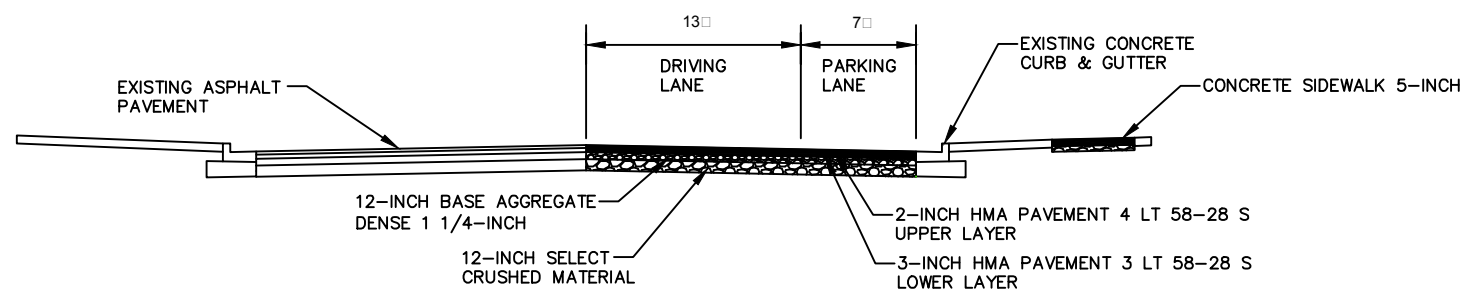
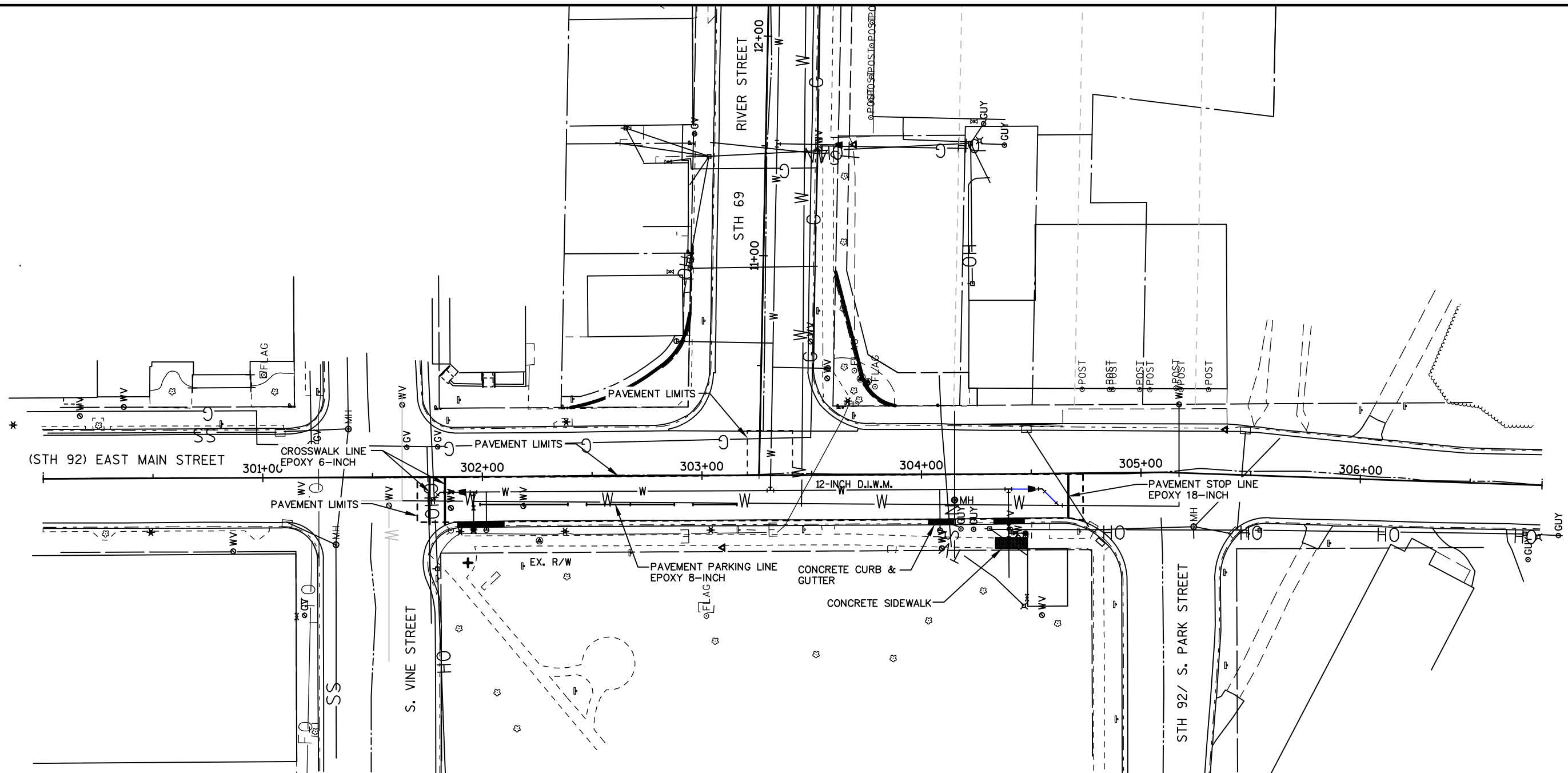
PLOT SCALE : 1 IN:50 FT

WISDOT/CADDs SHEET 41

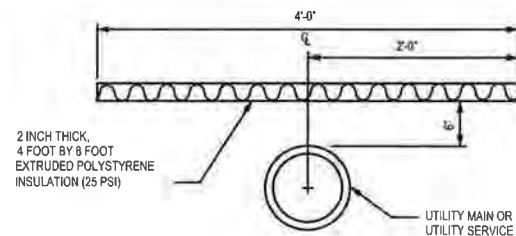


3RD AVE. PROFILE

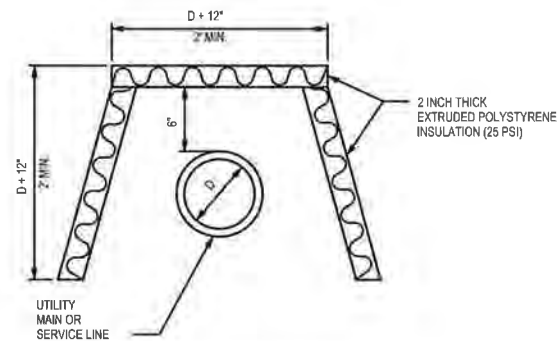




S.T.H. 69/92 (MAIN STREET)
 STA. 301+76.85 TO STA. 304+62.37
 (TYPICAL SECTION REMAINS THE SAME
 WHERE THE WATER MAIN CROSSES THE
 NORTH LANES)



STANDARD INSTALLATION



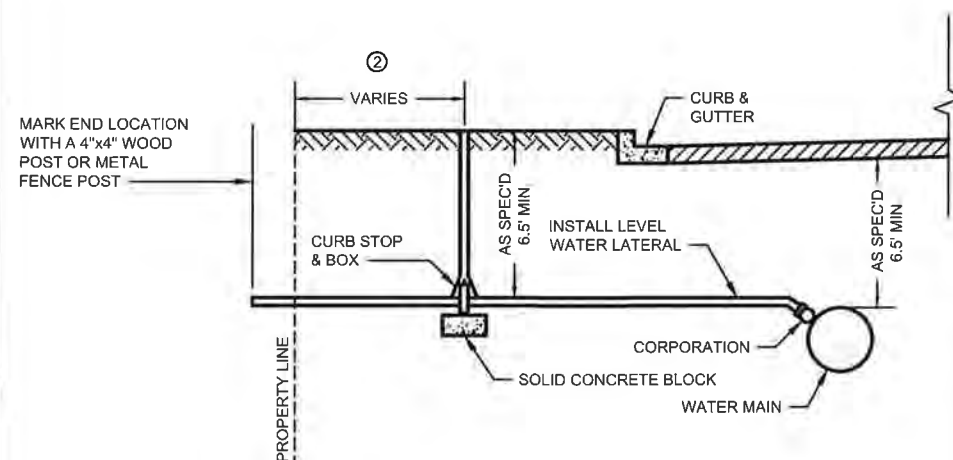
SIDE PROTECTION INSTALLATION

GENERAL NOTES:

- 1 THE SIDE PROTECTION INSTALLATION SHALL BE USED WHERE FROST WILL PENETRATE BELOW THE PIPE INVERT.

PIPE INSULATION DETAIL

SCALE: NONE

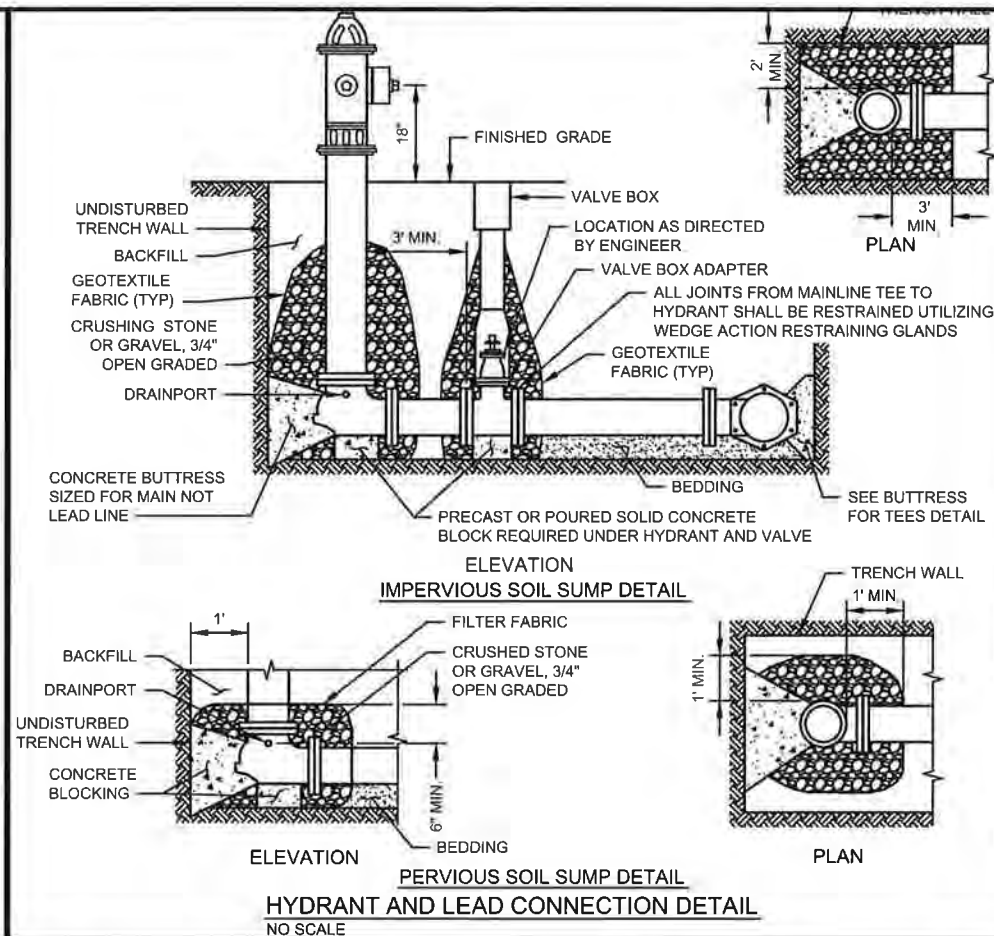


GENERAL NOTES:

- 1 SEE PLANS AND SPECIFICATIONS FOR SIZE AND TYPE OF CURB STOP AND BOX CORPORATION AND SERVICE LINE.
2 COMMUNITY STANDARDS SHALL SUPERSEDE THE DIMENSIONS FROM THE PROPERTY LINE

WATER SERVICE DETAIL

NO SCALE

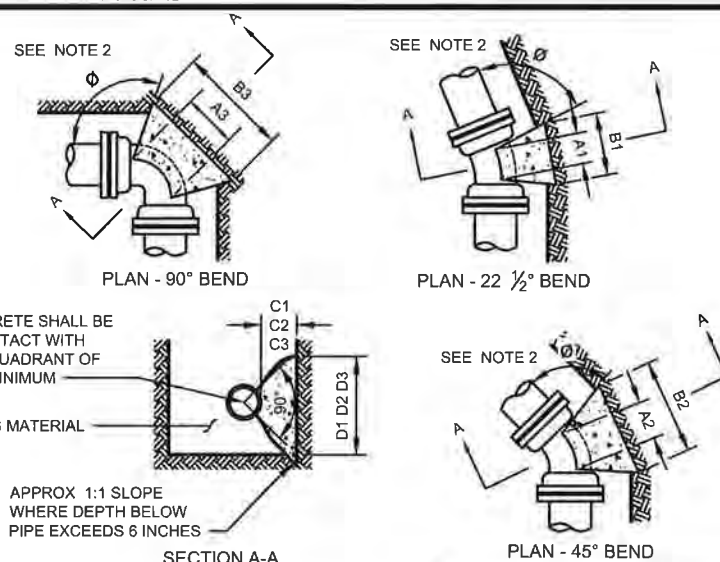


ELEVATION

IMPERVIOUS SOIL SUMP DETAIL

HYDRANT AND LEAD CONNECTION DETAIL

NO SCALE



SECTION A-A

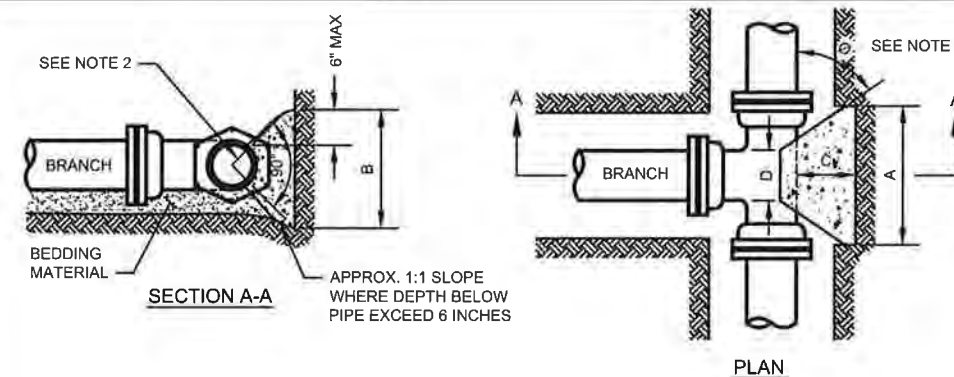
NOTES:

1. DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 P.S.I. AND AN EARTH RESISTANCE OF 2 TONS PER SQ. FT. INFORM THE ENGINEER IF PRESSURES EXCEED 150 PSI, OR ON-SITE SOIL DOES NOT MEET THIS CONDITION
2. DIMENSION C1 C2 C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE ϕ EQUAL TO OR LARGER THAN 45°
3. DIMENSION A1 A2 A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH THE MECHANICAL JOINT.
4. BUTTRESS TO BE POURED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
5. ALL BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
6. CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI
7. IN ADDITION TO BUTTRESS, ALL JOINTS SURROUNDING BENDS SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

BUTTRESS FOR BENDS DETAIL

NO SCALE

| PIPE SIZE | BUTTRESS DIMENSIONS | | | | | |
|-----------|---------------------|-------|-----------|--------|-----------|--------|
| | 22 1/2° BENDS | | 45° BENDS | | 90° BENDS | |
| | B1 | D1 | B2 | D2 | B3 | D3 |
| 6" | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 1'-4" | 1'-2" |
| 8" | 1'-0" | 1'-0" | 1'-4" | 1'-2" | 1'-10" | 1'-6" |
| 10" | 1'-2" | 1'-2" | 1'-7" | 1'-7" | 2'-3" | 1'-10" |
| 12" | 1'-4" | 1'-4" | 1'-10" | 1'-10" | 2'-8" | 2'-3" |
| 16" | 1'-10" | 1'-8" | 2'-6" | 2'-4" | 3'-10" | 2'-10" |
| 20" | 2'-4" | 2'-0" | 3'-3" | 2'-10" | 5'-0" | 3'-4" |
| 24" | 2'-10" | 2'-4" | 4'-0" | 3'-3" | 6'-4" | 3'-10" |



NOTES:

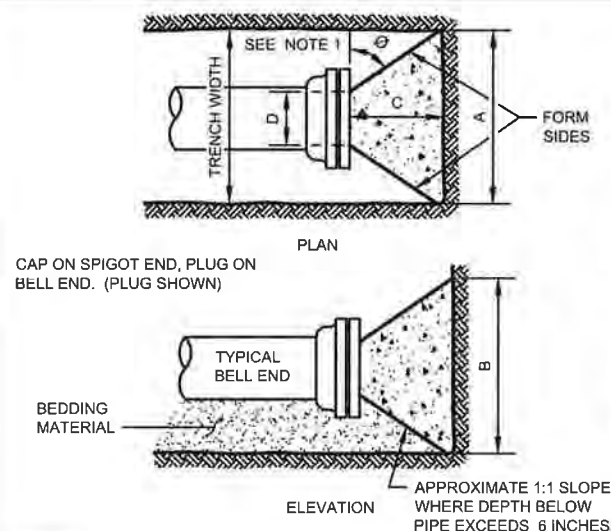
1. DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE ϕ GREATER THAN OR EQUAL TO 45°
2. CONCRETE SHOULD BEAR ON THIS QUADRANT OF PIPE AT A MINIMUM
3. DIMENSION 'D' SHOULD BE AS LARGE AS POSSIBLE BUT CONCRETE SHOULD NOT INTERFERE WITH MECHANICAL JOINTS
4. BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI. INFORM THE ENGINEER IF ON-SITE SOIL DOES NOT MEET THIS CONDITION OR PRESSURES EXCEED 150 PSI
5. BUTTRESS TO BE PLACED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
6. CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI
7. ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE
8. IN ADDITION TO BUTTRESSES, ALL JOINTS SURROUNDING TEES SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

BUTTRESS FOR TEES DETAIL

NO SCALE

| BUTTRESS DIMENSIONS | | | | |
|---------------------|--------|-------|---|---|
| DIA | A | B | C | D |
| 6" | 1'-3" | 1'-0" | | |
| 8" | 1'-6" | 1'-4" | | |
| 10" | 1'-10" | 1'-8" | | |
| 12" | 2'-3" | 2'-0" | | |
| 16" | 3'-2" | 2'-6" | | |
| 20" | 4'-0" | 3'-0" | | |
| 24" | 5'-3" | 3'-4" | | |

DIA = BRANCH DIAMETER



NOTES:

1. DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE ϕ EQUAL TO OR LARGER THAN 45°
2. DIMENSION 'D' EQUALS APPROX. 1 D OF PIPE LESS 2 INCHES. THE CONCRETE SHOULD NOT INTERFERE WITH THE MECHANICAL JOINTS.
3. WHERE BUTTRESSES ARE NOT POSSIBLE BECAUSE OF POOR SOIL CONDITIONS OR LACK OF ROOM, WEDGE ACTION RESTRAINING GLANDS SHALL BE PERMITTED
4. BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI. INFORM THE ENGINEER IF ON-SITE SOIL DOES NOT MEET THIS CONDITION OR PRESSURES EXCEED 150 PSI
5. BUTTRESS TO BE POURED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557
6. CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI
7. ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
8. NO WOOD BUTTRESS ALLOWED.

BUTTRESS FOR PLUGS DETAIL

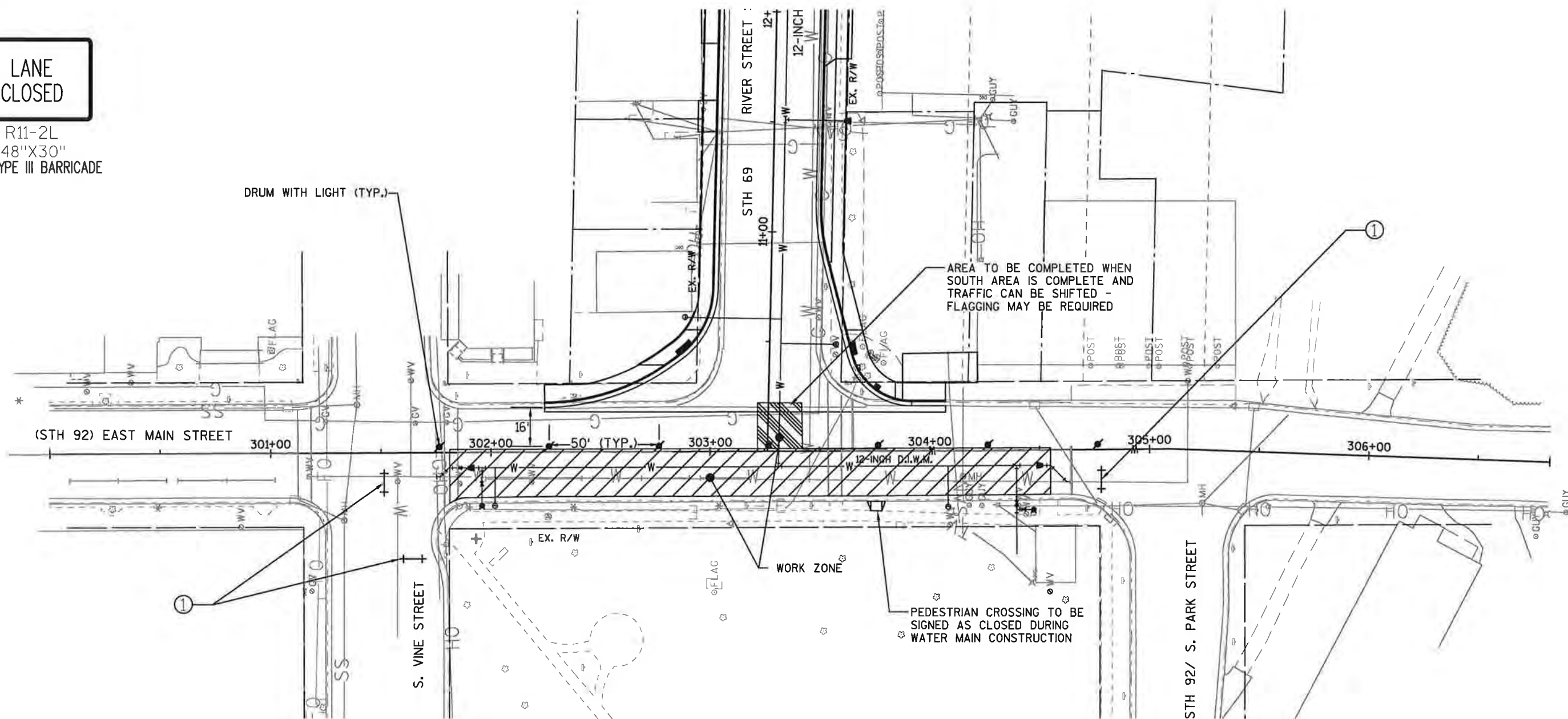
NO SCALE

| BUTTRESS DIMENSIONS | | | | |
|---------------------|-------|--------|---|---|
| DIA | A | B | C | D |
| 6" | 1'-6" | 1'-2" | | |
| 8" | 2'-0" | 1'-4" | | |
| 12" | 2'-5" | 1'-10" | | |
| 16" | 3'-4" | 2'-4" | | |
| 20" | 4'-3" | 2'-10" | | |
| 24" | 5'-2" | 3'-4" | | |
| 30" | 6'-9" | 4'-0" | | |

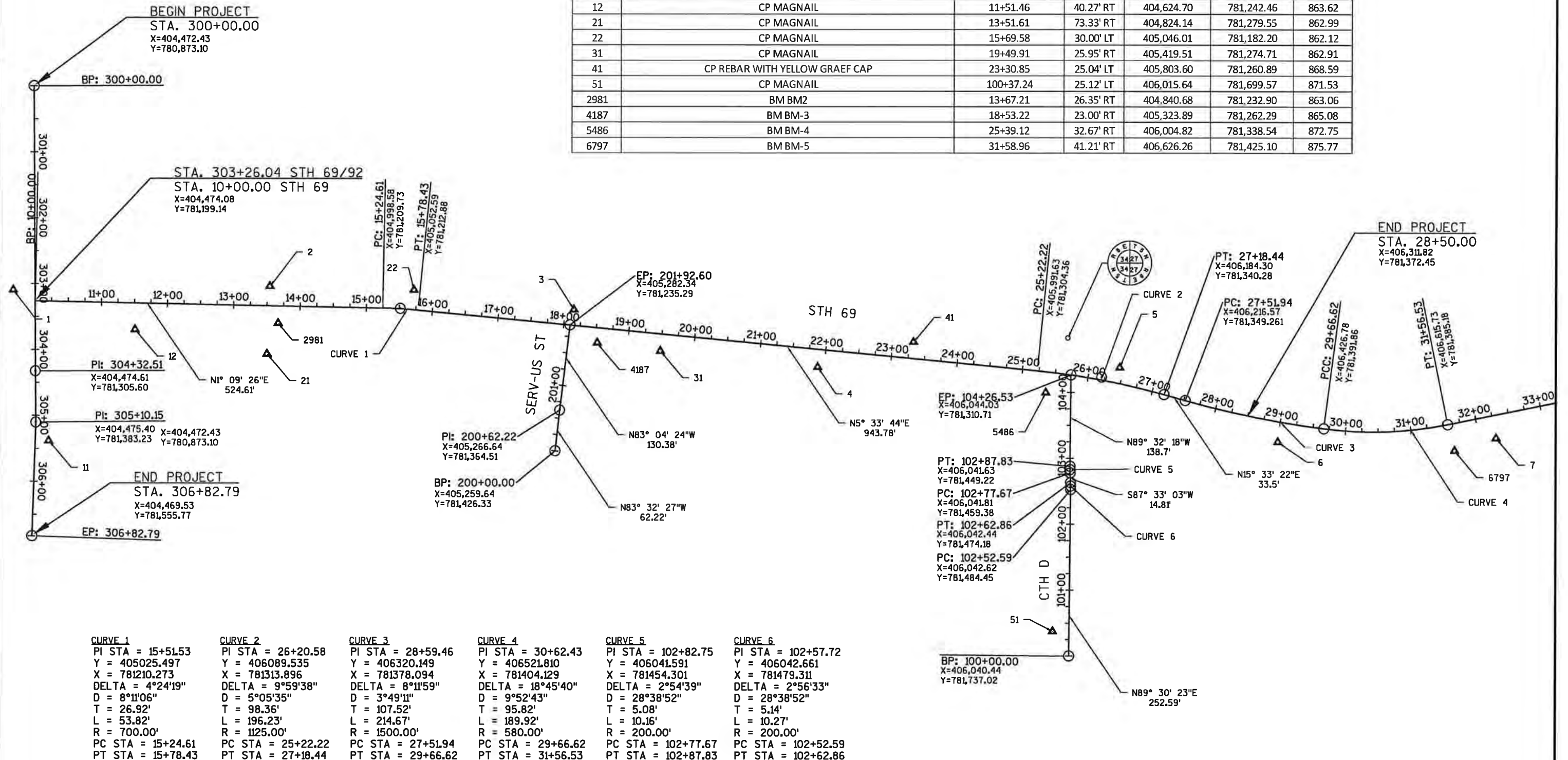
NOTES:

- CONTRACTOR SHALL REFER TO THE FOLLOWING WISDOT STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL
-TRAFFIC CONTROL, LANE CLOSURE
- PROVIDE FLAGGING FOR 1-WAY OPERATIONAL NEEDS PER WISDOT STANDARD DETAIL DRAWING: TRAFFIC CONTROL FOR LANE CLOSURE SUITABLE FOR MOVING OPERATIONS.
- CONTRACTOR TO MAINTAIN MINIMUM 16-FOOT WIDE THROUGH TRAFFIC LANE DURING WATERMAIN CONSTRUCTION.

①

LANE
CLOSEDR11-2L
48"X30"
ON TYPE III BARRICADE

| CONTROL POINTS | | | | | | |
|----------------|--------------------------------|-----------|------------|--------------|--------------|-----------|
| POINT | Description | STATION | OFFSET | Y COORDINATE | X COORDINATE | ELEVATION |
| 1 | CP REBAR WITH YELLOW GRAEF CAP | 9+67.06 | 17.18' LT | 404,441.14 | 781,182.57 | 867.07 |
| 2 | CP REBAR WITH YELLOW GRAEF CAP | 13+53.67 | 29.56' LT | 404,828.27 | 781,176.72 | 862.52 |
| 3 | CP REBAR WITH YELLOW GRAEF CAP | 18+13.02 | 23.70' LT | 405,288.07 | 781,212.06 | 862.97 |
| 4 | CP MAGNAIL | 21+90.00 | 26.96' RT | 405,658.42 | 781,299.02 | 868.18 |
| 5 | CP REBAR WITH YELLOW GRAEF CAP | 26+44.15 | 23.81' LT | 406,117.05 | 781,299.43 | 872.84 |
| 6 | CP MAGNAIL | 29+01.46 | 30.56' RT | 406,357.14 | 781,412.23 | 874.16 |
| 7 | CP REBAR WITH YELLOW GRAEF CAP | 32.24.54 | 35.07' RT | 406,689.34 | 781,406.11 | 874.09 |
| 11 | CP MAGNAIL | 10+25.07 | 211.92' RT | 404,494.88 | 781,411.52 | 866.05 |
| 12 | CP MAGNAIL | 11+51.46 | 40.27' RT | 404,624.70 | 781,242.46 | 863.62 |
| 21 | CP MAGNAIL | 13+51.61 | 73.33' RT | 404,824.14 | 781,279.55 | 862.99 |
| 22 | CP MAGNAIL | 15+69.58 | 30.00' LT | 405,046.01 | 781,182.20 | 862.12 |
| 31 | CP MAGNAIL | 19+49.91 | 25.95' RT | 405,419.51 | 781,274.71 | 862.91 |
| 41 | CP REBAR WITH YELLOW GRAEF CAP | 23+30.85 | 25.04' LT | 405,803.60 | 781,260.89 | 868.59 |
| 51 | CP MAGNAIL | 100+37.24 | 25.12' LT | 406,015.64 | 781,699.57 | 871.53 |
| 2981 | BM BM2 | 13+67.21 | 26.35' RT | 404,840.68 | 781,232.90 | 863.06 |
| 4187 | BM BM-3 | 18+53.22 | 23.00' RT | 405,323.89 | 781,262.29 | 865.08 |
| 5486 | BM BM-4 | 25+39.12 | 32.67' RT | 406,004.82 | 781,338.54 | 872.75 |
| 6797 | BM BM-5 | 31+58.96 | 41.21' RT | 406,626.26 | 781,425.10 | 875.77 |



Estimate Of Quantities By Plan Sets

1690-05-72

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|---|------|---------|---------|
| 0050 | 204.0100 | Removing Pavement | SY | 718.000 | 718.000 |
| 0070 | 204.0150 | Removing Curb & Gutter | LF | 35.000 | 35.000 |
| 0080 | 204.0155 | Removing Concrete Sidewalk | SY | 115.000 | 115.000 |
| 0170 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 600.000 | 600.000 |
| 0240 | 460.2000 | Incentive Density HMA Pavement | DOL | 130.000 | 130.000 |
| 0260 | 460.5223 | HMA Pavement 3 LT 58-28 S | TON | 117.000 | 117.000 |
| 0270 | 460.5224 | HMA Pavement 4 LT 58-28 S | TON | 78.000 | 78.000 |
| 0390 | 601.0411 | Concrete Curb & Gutter 30-Inch Type D | LF | 35.000 | 35.000 |
| 0410 | 602.0410 | Concrete Sidewalk 5-Inch | SF | 115.000 | 115.000 |
| 0620 | 619.1000 | Mobilization | EACH | 0.100 | 0.100 |
| 0640 | 625.0100 | Topsoil | SY | 200.000 | 200.000 |
| 0730 | 628.7020 | Inlet Protection Type D | EACH | 4.000 | 4.000 |
| 0750 | 629.0210 | Fertilizer Type B | CWT | 0.250 | 0.250 |
| 0760 | 630.0140 | Seeding Mixture No. 40 | LB | 5.000 | 5.000 |
| 0910 | 643.0100 | Traffic Control (project) 02. 1690-05-72 | EACH | 1.000 | 1.000 |
| 0920 | 643.0300 | Traffic Control Drums | DAY | 98.000 | 98.000 |
| 0930 | 643.0420 | Traffic Control Barricades Type III | DAY | 42.000 | 42.000 |
| 1110 | 647.0566 | Pavement Marking Stop Line Epoxy 18-Inch | LF | 20.000 | 20.000 |
| 1120 | 647.0656 | Pavement Marking Parking Stall Epoxy | LF | 124.000 | 124.000 |
| 1140 | 647.0766 | Pavement Marking Crosswalk Epoxy 6-Inch | LF | 40.000 | 40.000 |
| 1230 | 690.0150 | Sawing Asphalt | LF | 400.000 | 400.000 |
| 1240 | 690.0250 | Sawing Concrete | LF | 30.000 | 30.000 |
| 1290 | SPV.0060 | Special 01. Remove & Salvage Existing Casting Frames & Grates | EACH | 2.000 | 2.000 |
| 1300 | SPV.0060 | Special 02. Sanitary Manhole Casting R-1550-A | EACH | 2.000 | 2.000 |
| 1310 | SPV.0060 | Special 03. Sanitary Manhole Chimney Seal | EACH | 2.000 | 2.000 |
| 1320 | SPV.0060 | Special 04. Remove & Replace Sanitary Manhole Cone Section | EACH | 1.000 | 1.000 |
| 1330 | SPV.0060 | Special 05. Adjust Casting | EACH | 2.000 | 2.000 |
| 1340 | SPV.0060 | Special 06. Remove & Salvage Existing Hydrant | EACH | 4.000 | 4.000 |
| 1350 | SPV.0060 | Special 07. Utility Line Opening - ULO | EACH | 2.000 | 2.000 |
| 1360 | SPV.0060 | Special 08. 12-Inch D.I. 45 Deg. Bend | EACH | 4.000 | 4.000 |
| 1370 | SPV.0060 | Special 09. 8-Inch D.I. 45 Deg. Bend | EACH | 2.000 | 2.000 |
| 1380 | SPV.0060 | Special 10. 6-Inch D.I. 45 Deg. Bend | EACH | 6.000 | 6.000 |
| 1390 | SPV.0060 | Special 11. 6-Inch D.I. 11.25 Deg. Bend | EACH | 1.000 | 1.000 |
| 1400 | SPV.0060 | Special 12. 12-Inch x 12-Inch D.I. Tee | EACH | 1.000 | 1.000 |
| 1410 | SPV.0060 | Special 13. 12-Inch x 10-Inch D.I. Tee | EACH | 1.000 | 1.000 |
| 1420 | SPV.0060 | Special 14. 12-Inch x 6-Inch D.I. Tee | EACH | 7.000 | 7.000 |
| 1430 | SPV.0060 | Special 15. 10-Inch x 6-Inch D.I. Tee | EACH | 1.000 | 1.000 |
| 1440 | SPV.0060 | Special 16. 12-Inch D.I. Cap | EACH | 1.000 | 1.000 |

Estimate Of Quantities By Plan Sets

1690-05-72

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|--|------|-----------|-----------|
| 1450 | SPV.0060 | Special 17. 12-Inch x 8-Inch D.I. Reducer | EACH | 1.000 | 1.000 |
| 1460 | SPV.0060 | Special 18. 12-Inch x 6-InchD.I. Reducer | EACH | 1.000 | 1.000 |
| 1470 | SPV.0060 | Special 19. 10-Inch x 6-Inch D.I. Reducer | EACH | 1.000 | 1.000 |
| 1480 | SPV.0060 | Special 20. 6-Inch x 3-Inch D.I. Reducer | EACH | 1.000 | 1.000 |
| 1490 | SPV.0060 | Special 21. Water Service Tap W/Corp Stop 1-Inch | EACH | 18.000 | 18.000 |
| 1500 | SPV.0060 | Special 22. Curb Stop and Box 1-Inch | EACH | 18.000 | 18.000 |
| 1510 | SPV.0060 | Special 23. 12-Inch Valve and Box W/Alignment Saddle | EACH | 2.000 | 2.000 |
| 1520 | SPV.0060 | Special 24. 10-Inch Valve and Box W/Alignment Saddle | EACH | 1.000 | 1.000 |
| 1530 | SPV.0060 | Special 25. 8-Inch Valve and Box W/Alignment Saddle | EACH | 1.000 | 1.000 |
| 1540 | SPV.0060 | Special 26. 6-Inch Valve and Box W/Alignment Saddle | EACH | 7.000 | 7.000 |
| 1550 | SPV.0060 | Special 27. Connect to Existing Water Main | EACH | 8.000 | 8.000 |
| 1560 | SPV.0060 | Special 28. Fire Hydrant | EACH | 5.000 | 5.000 |
| 1580 | SPV.0090 | Special 01. Water Service 1-Inch Copper | LF | 516.000 | 516.000 |
| 1590 | SPV.0090 | Special 02. D.I.W.M. 12-Inch | LF | 1,625.000 | 1,625.000 |
| 1600 | SPV.0090 | Special 03. D.I.W.M. 10-Inch | LF | 40.000 | 40.000 |
| 1610 | SPV.0090 | Special 04. D.I.W.M. 8-Inch | LF | 16.000 | 16.000 |
| 1620 | SPV.0090 | Special 05. D.I.W.M. 6-Inch | LF | 319.000 | 319.000 |
| 1630 | SPV.0090 | Special 06. Trench Backfill - Water Main | LF | 2,050.000 | 2,050.000 |
| 1650 | SPV.0105 | Special 01. Abandon Existing Water Main | LS | 1.000 | 1.000 |
| 1660 | SPV.0165 | Special 01. Insulation | SF | 288.000 | 288.000 |

3

REMOVALS

| CATEGORY | STATION | TO STATION | LOCATION | (204.0100) | (204.0150) | (204.0155) | (690.0150) | (690.0250) |
|--------------------------|-----------|------------|----------|----------------------------|-----------------------------------|-------------------------------------|-------------------------|--------------------------|
| | | | | REMOVING PAVEMENT SY | REMOVING CURB AND GUTTER LF | REMOVING CONCRETE SIDEWALK SF | SAWING ASPHALT LF | SAWING CONCRETE LF |
| 0020 | 301+71.00 | 304+74.00 | RT | 674 | | | 340 | |
| 0020 | 301+89.00 | 302+11.00 | RT | | 12 | | | 5 |
| 0020 | 303+21.00 | 303+41.00 | LT | 44 | | | 60 | |
| 0020 | 304+02.00 | 304+10.00 | RT | | 8 | | | 5 |
| 0020 | 304+32.00 | 304+47.00 | RT | | 15 | | | 5 |
| 0020 | 304+34.00 | 304+49.00 | RT | | | 75 | | 10 |
| 0020 | 16+00.00 | 16+04.00 | LT | | | 40 | | 5 |
| Project 1690-05-72 TOTAL | | | | 718 | 35 | 115 | 400 | 30 |

PAVEMENT MARKING

| CATEGORY | STATION | TO STATION | LOCATION | (647.0656) | (647.0566) | (647.0766) |
|--------------------------|-----------|------------|----------|---|---|--|
| | | | | PAVEMENT MARKING PARKING STALL EPOXY LF | PAVEMENT MARKING STOP LINE EPOXY 18-INCH LF | PAVEMENT MARKING CROSSWALK EPOXY 6-INCH LF |
| 0020 | 301+76.00 | 301+85.00 | RT | | | 40 |
| 0020 | 301+98.00 | 303+17.00 | RT | 124 | | |
| 0020 | 304+67.00 | 304+67.00 | RT | | 20 | |
| Project 1690-05-72 TOTAL | | | | 124 | 20 | 40 |

RESTORATION

| CATEGORY | STATION | TO STATION | LOCATION | (625.0100) | (629.0210) | (630.0140) |
|--------------------------|-----------|------------|----------|---------------|-----------------------------|---------------------------------|
| | | | | TOPSOIL SY | FERTILIZER TYPE B CWT | SEEDING MIXTURE NO. 40 LB |
| 0020 | 301+87.00 | 302+13.00 | RT | 15 | 0.02 | 0.4 |
| 0020 | 304+00.00 | 304+12.00 | RT | 10 | 0.01 | 0.2 |
| 0020 | 304+30.00 | 304+50.00 | RT | 15 | 0.02 | 0.4 |
| 0020 | 304+30.00 | 304+50.00 | RT | 100 | 0.12 | 2.5 |
| 0020 | 15+97.00 | 16+07.00 | LT | 60 | 0.08 | 1.5 |
| Project 1690-05-72 TOTAL | | | | 200 | 0.25 | 5 |

TRAFFIC CONTROL

| CATEGORY | LOCATION | (643.0100.02) | (643.0300) | (643.0420) |
|--------------------------|----------|---|---------------------------------------|--|
| | | TRAFFIC CONTROL (1690-05-72) EACH | TRAFFIC CONTROL DRUMS DRUM DAYS | TRAFFIC CONTROL BARRICADES TYPE III EACH DAYS |
| 0020 | STH 92 | 1 | 7 | 98 |
| Project 1690-05-72 TOTAL | | 1 | 7 | 98 |

CONCRETE CURB & GUTTER AND SIDEWALK

| CATEGORY | STATION | TO STATION | LOCATION | (601.0411) | (602.0410) |
|--------------------------|-----------|------------|----------|--|-----------------------------------|
| | | | | CONCRETE CURB & GUTTER 30-INCH TYPE D LF | CONCRETE SIDEWALK 5-INCH SF |
| 0020 | 301+89.00 | 302+11.00 | RT | 12 | |
| 0020 | 304+02.00 | 304+10.00 | RT | 8 | |
| 0020 | 304+32.00 | 304+47.00 | RT | 15 | |
| 0020 | 304+34.00 | 304+49.00 | RT | | 75 |
| 0020 | 16+00.00 | 16+04.00 | LT | | 40 |
| Project 1690-05-72 TOTAL | | | | 35 | 115 |

INLET PROTECTION

| CATEGORY | STATION | LOCATION | (628.7020) |
|--------------------------|-----------|----------|------------------------------------|
| | | | INLET PROTECTION TYPE D EACH |
| 0020 | 301+08.00 | 20' LT | 1 |
| 0020 | 301+11.00 | 20' RT | 1 |
| 0020 | 304+48.00 | 20' LT | 1 |
| 0020 | 304+78.00 | 22' RT | 1 |
| Project 1690-05-72 TOTAL | | | 4 |

MOBILIZATION

| CATEGORY | LOCATION | (619.1000) |
|--------------------------|--------------------|----------------------|
| | | MOBILIZATION EACH |
| 0020 | PROJECT 1690-05-72 | 0.1 |
| Project 1690-05-72 TOTAL | | 0.1 |

* MOBILIZATION = COMBINATION OF PROJECT ID 1690-05-71 AND 1690-05-72. ADDITIONAL 0.9 QUANTITY OF MOBILIZATION IN PROJECT 1690-05-71.

HMA PAVEMENT AND BASE AGGREGATE

| CATEGORY | STATION | TO STATION | LOCATION | (305.0120) | (460.5223) | (460.5224) |
|--------------------------|-----------|------------|----------|---|-------------------------------------|-------------------------------------|
| | | | | BASE AGGREGATE DENSE 1 1/4-INCH TON | HMA PAVEMENT 3 LT 58-28 S TON | HMA PAVEMENT 4 LT 58-28 S TON |
| 0020 | 301+71.00 | 304+74.00 | RT | 565 | 110 | 73 |
| 0020 | 303+21.00 | 303+41.00 | LT | 35 | 7 | 5 |
| Project 1690-05-72 TOTAL | | | | 600 | 117 | 78 |

3

3

3

PROPOSED FITTINGS

| CATEGORY | STATION | LOCATION | (SPV.0060.08) | (SPV.0060.09) | (SPV.0060.10) | (SPV.0060.11) | (SPV.0060.12) | (SPV.0060.13) | (SPV.0060.14) | (SPV.0060.15) | (SPV.0060.16) | (SPV.0060.17) | (SPV.0060.18) | (SPV.0060.19) | (SPV.0060.20) |
|--------------------------|-----------|----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|----------------------|----------------------|--------------------------|----------------------|
| | | | 12-INCH D.I. 45 | 8-INCH D.I. 45 | 6-INCH D.I. 45 | 6-inch D.I. 11.25 | 12-INCH X 12-INCH | 12-INCH X 10-INCH | 12-INCH X 6-INCH | 10-INCH X 6-INCH | 12-INCH | 12-INCH X 8-INCH | 12-INCH X 6-INCH | 10-INCH X 6-INCH | 6-INCH X 3-INCH |
| | | | DEG. BEND EACH | DEG. BEND EACH | DEG. BEND EACH | DEG. BEND EACH | D.I. TEE EACH | D.I. TEE EACH | D.I. TEE EACH | D.I. TEE EACH | D.I. CAP EACH | D.I. REDUCER EACH | D.I. REDUCER EACH | D.I. REDUCER 10" x 6" | D.I. REDUCER EACH |
| 0020 | 11+51.11 | 5.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 11+51.15 | 32.9' RT | | | | | | | | | | | | | 1 |
| 0020 | 12+58.01 | 5.0' RT | 1 | | | | | | | | | | | | |
| 0020 | 12+72.35 | 31.6' LT | 1 | | | | | | | | | | | | |
| 0020 | 16+01.25 | 37.3' LT | 1 | | | | | | | | | | | | |
| 0020 | 16+50.23 | 5.0' RT | 1 | | | | | | | | | | | | |
| 0020 | 18+17.45 | 5.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 18+49.28 | 5.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 20+85.00 | 5.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 25+33.48 | 5.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 25+94.22 | 5.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 26+70.08 | 5.0' RT | | | | | | | | | 1 | | | | |
| 0020 | 102+97.28 | 9.1' RT | | | 1 | | | | | | | | | | |
| 0020 | 103+02.26 | 14.2' RT | | | 1 | | | | | | | | | | |
| 0020 | 104+01.86 | 15.4' RT | | | | 1 | | | | | | | | | |
| 0020 | 201+26.03 | 8.0' RT | | | 1 | | | | | | | | | | |
| 0020 | 201+21.73 | 12.4' RT | | | 1 | | | | | | | | | | |
| 0020 | 301+76.85 | 13.3' RT | | 1 | | | | | | | | | | | |
| 0020 | 301+80.81 | 7.0' RT | | 1 | | | | | | | | | | | |
| 0020 | 301+89.48 | 7.0' RT | | | | | | | | | | 1 | | | |
| 0020 | 301+95.91 | 7.0' RT | | | | | | | 1 | | | | | | |
| 0020 | 303+31.14 | 7.0' RT | | | | | 1 | | | | | | | | |
| 0020 | 304+39.57 | 7.0' RT | | | | | | 1 | | | | | | | |
| 0020 | 304+39.44 | 47.2' RT | | | | | | | | | | | | 1 | |
| 0020 | 304+39.50 | 27.0' RT | | | | | | | | 1 | | | | | |
| 0020 | 304+51.42 | 7.0' RT | | | | | | | | | | | 1 | | |
| 0020 | 304+54.91 | 7.0' RT | | | 1 | | | | | | | | | | |
| 0020 | 304+62.37 | 14.6' RT | | | 1 | | | | | | | | | | |
| Project 1690-05-72 TOTAL | | | 4 | 2 | 6 | 1 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 |

SANITARY SEWER

| LOCATION | | | | (SPV.0060.01) | (SPV.0060.02) | (SPV.0060.03) | (SPV.0060.04) | (SPV.0060.05) |
|--------------------------|----------|----------|------------------|---------------------------|------------------|------------------|-----------------------|----------------|
| | | | | REMOVE & SALVAGE | SANITARY MANHOLE | SANITARY MANHOLE | REMOVE & REPLACE | ADJUST CASTING |
| | | | | EXISTING CASTINGS, FRAMES | CASTING R-1550-A | CHIMNEY SEAL | SANITARY MANHOLE CONE | EACH |
| | | | | & GRATES | EACH | EACH | SECTION | |
| CATEGORY | STATION | (FT) | RIM ELEVATION | EACH | | | EACH | |
| 0010 | 15+50.39 | 21.2' LT | 861.54 | 1 | 1 | 1 | 1 | 1 |
| 0010 | 17+41.12 | 23.7' LT | 862.78 | 1 | 1 | 1 | | 1 |
| Project 1690-05-72 TOTAL | | | | 2 | 2 | 2 | 1 | 2 |

ABANDON WATER MAIN

| | | FROM | | TO | | (SPV.0105.01) |
|--------------------------|-----------|----------|-----------|----------|--|------------------|
| | | | | | | ABANDON EXISTING |
| CATEGORY | STATION | LOCATION | STATION | LOCATION | | WATER MAIN |
| | | | | | | LUMP SUM |
| 0020 | 301+76.85 | 11.0' RT | 304+62.37 | 14.6' RT | | |
| 0020 | 303+45.32 | 13.0' RT | 12+46.39 | 16.6' RT | | |
| 0020 | 304+40.91 | 14.2' RT | 304+39.49 | 47.4' RT | | |
| 0020 | 12+46.39 | 16.6' RT | 12+46.99 | 12.3' LT | | |
| 0020 | 12+46.99 | 12.3' LT | 12+72.45 | 34.3' LT | | |
| 0020 | 16+01.26 | 37.1' LT | 16+01.84 | 15.3' RT | | |
| 0020 | 16+01.84 | 15.3' RT | 25+88.05 | 16.0' RT | | |
| 0020 | 201+21.73 | 12.4' RT | 201+81.55 | 10.8' RT | | |
| 0020 | 102+97.28 | 9.1' RT | 104+08.67 | 10.5' RT | | |
| Project 1690-05-72 TOTAL | | | | | | 1 |

PROJECT NO:1690-05-72

HWY:STH 69

COUNTY:DANE

MISCELLANEOUS QUANTITIES

SHEET

E

3

| WATER SERVICES | | | | | |
|--------------------------|-----------|----------|--------------------|---------------|---------------|
| CATEGORY | STATION | LOCATION | (SPV.0060.21) | (SPV.0060.22) | (SPV.0090.01) |
| | | | WATER SERVICE TAP | CURB STOP AND | WATER SERVICE |
| | | | W/CORP STOP 1-INCH | BOX 1-INCH | 1-INCH COPPER |
| | | | EACH | EACH | LF |
| 0020 | 10+49.33 | 30.4' RT | 1 | 1 | 25 |
| 0020 | 10+60.25 | 38.8' LT | 1 | 1 | 44 |
| 0020 | 15+34.39 | 29.9' RT | 1 | 1 | 100 |
| 0020 | 16+32.74 | 25.5' RT | 1 | 1 | 36 |
| 0020 | 16+92.34 | 25.2' RT | 1 | 1 | 20 |
| 0020 | 17+23.29 | 31.7' LT | 1 | 1 | 37 |
| 0020 | 17+32.87 | 25.4' RT | 1 | 1 | 20 |
| 0020 | 17+78.41 | 31.4' LT | 1 | 1 | 37 |
| 0020 | 18+63.42 | 24.5' RT | 1 | 1 | 20 |
| 0020 | 19+38.57 | 24.7' RT | 1 | 1 | 20 |
| 0020 | 19+80.25 | 24.2' RT | 1 | 1 | 20 |
| 0020 | 20+52.91 | 24.7' RT | 1 | 1 | 20 |
| 0020 | 21+48.58 | 24.3' RT | 1 | 1 | 20 |
| 0020 | 22+30.10 | 24.3' RT | 1 | 1 | 20 |
| 0020 | 23+94.45 | 24.3' RT | 1 | 1 | 20 |
| 0020 | 24+73.44 | 24.7' RT | 1 | 1 | 20 |
| 0020 | 302+01.79 | 24.3' RT | 1 | 1 | 18 |
| 0020 | 304+08.38 | 25.5' RT | 1 | 1 | 19 |
| Project 1690-05-72 TOTAL | | | 18 | 18 | 516 |

| CONNECT TO EXISTING WATER MAIN | | | | |
|--------------------------------|-----------|----------|---------------|---------------------|
| CATEGORY | STATION | LOCATION | (SPV.0060.07) | (SPV.0060.27) |
| | | | UTILITY LINE | CONNECT TO EXISTING |
| | | | OPENING - ULO | WATER MAIN |
| | | | EACH | EACH |
| 0020 | 11+51.15 | 32.9' RT | | 1 |
| 0020 | 12+72.35 | 35.6' LT | | 1 |
| 0020 | 12+72.47 | 35.6' LT | 1 | |
| 0020 | 16+00.90 | 41.3' LT | 1 | |
| 0020 | 16+00.94 | 46.3' LT | | 1 |
| 0020 | 102+97.28 | 9.1' RT | | 1 |
| 0020 | 201+21.73 | 12.4' RT | | 1 |
| 0020 | 301+76.85 | 10.9' RT | | 1 |
| 0020 | 304+39.44 | 47.2' RT | | 1 |
| 0020 | 304+62.76 | 14.9' RT | | 1 |
| Project 1690-05-72 TOTAL | | | 2 | 8 |

| PROPOSED HYDRANTS | | | | |
|--------------------------|-----------|----------|------------------|---------------|
| CATEGORY | STATION | LOCATION | (SPV.0060.06) | (SPV.0060.28) |
| | | | REMOVE & SALVAGE | FIRE HYDRANT |
| | | | EXISTING HYDRANT | EACH |
| | | | EACH | |
| 0020 | 18+49.58 | 24.5' RT | | 1 |
| 0020 | 18+53.28 | 22.8' RT | 1 | |
| 0020 | 20+85.00 | 24.4' RT | | 1 |
| 0020 | 25+33.45 | 35.8' RT | | 1 |
| 0020 | 25+38.67 | 31.6' RT | 1 | |
| 0020 | 301+85.58 | 24.5' RT | 1 | |
| 0020 | 301+95.90 | 24.2' RT | | 1 |
| 0020 | 304+47.13 | 28.6' RT | 1 | |
| 0020 | 304+47.21 | 27.1' RT | | 1 |
| Project 1690-05-72 TOTAL | | | 4 | 5 |

| PROPOSED VALVES | | | | | |
|--------------------------|-----------|----------|-----------------------|-----------------------|----------------------|
| CATEGORY | STATION | LOCATION | (SPV.0060.23) | (SPV.0060.24) | (SPV.0060.25) |
| | | | 12-INCH VALVE AND BOX | 10-INCH VALVE AND BOX | 8-INCH VALVE AND BOX |
| | | | W/ALIGNMENT SADDLE | W/ALIGNMENT SADDLE | W/ALIGNMENT SADDLE |
| | | | EACH | EACH | EACH |
| 0020 | 12+71.65 | 8.7' LT | | | |
| 0020 | 18+21.48 | 5.0' RT | 1 | | |
| 0020 | 18+49.28 | 16.8' RT | | | 1 |
| 0020 | 20+85.00 | 17.0' RT | | | 1 |
| 0020 | 25+33.46 | 18.2' RT | | | 1 |
| 0020 | 25+98.07 | 5.0' RT | 1 | | |
| 0020 | 103+07.77 | 14.2' RT | | | 1 |
| 0020 | 201+31.41 | 8.0' RT | | | 1 |
| 0020 | 301+85.76 | 7.0' RT | | | 1 |
| 0020 | 301+95.90 | 14.2' RT | | | 1 |
| 0020 | 304+39.51 | 23.9' RT | | | 1 |
| 0020 | 304+42.64 | 27.0' RT | | 1 | |
| Project 1690-05-72 TOTAL | | | 2 | 1 | 7 |

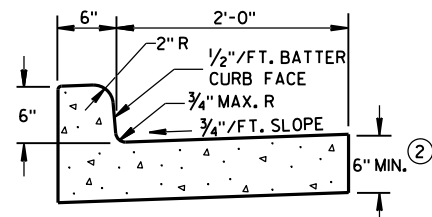
| INSULATION | | | |
|--------------------------|-----------|----------|---------------|
| CATEGORY | STATION | LOCATION | (SPV.0165.01) |
| | | | INSULATION |
| | | | SF |
| 0020 | 16+35.00 | 8.0' LT | 32 |
| 0020 | 16+45.00 | 0.0' RT | 32 |
| 0020 | 17+23.00 | 8.0' LT | 32 |
| 0020 | 17+78.00 | 8.0' LT | 32 |
| 0020 | 17+92.00 | 5.0' RT | 32 |
| 0020 | 19+26.00 | 5.0' RT | 32 |
| 0020 | 22+97.00 | 5.0' RT | 32 |
| 0020 | 26+53.00 | 5.0' RT | 32 |
| 0020 | 103+85.00 | 15.0' RT | 32 |
| Project 1690-05-72 TOTAL | | | 288 |

| WATER MAIN | | | | | | | | | | |
|--------------------------|-----------|----------|-----------|----------|----------|------------------|------------------|-----------------|-----------------|-----------------|
| CATEGORY | STATION | LOCATION | FROM | TO | LOCATION | (SPV.0090.02) | (SPV.0090.03) | (SPV.0090.04) | (SPV.0090.05) | (SPV.0090.06) |
| | | | | | | D.I.W.M. 12-Inch | D.I.W.M. 10-Inch | D.I.W.M. 8-Inch | D.I.W.M. 6-Inch | TRENCH BACKFILL |
| | | | | | | LF | LF | LF | LF | LF |
| 0020 | 303+31.14 | 7.0' RT | 12+35.77 | 5.0' RT | | 242 | | | | 242 |
| 0020 | 11+51.15 | 5.0' RT | 11+51.15 | 35.0' RT | | | | | 30 | 40 |
| 0020 | 12+35.77 | 5.0' RT | 12+72.35 | 31.6' LT | | 52 | | | | 52 |
| 0020 | 12+72.35 | 31.6' LT | 12+72.35 | 35.6' LT | | 4 | | | | 9 |
| 0020 | 16+00.94 | 46.3' LT | 16+01.25 | 37.3' LT | | 9 | | | | 9 |
| 0020 | 16+01.25 | 37.3' LT | 16+50.23 | 5.0' RT | | 64 | | | | 69 |
| 0020 | 16+50.23 | 5.0' RT | 18+17.45 | 5.0' RT | | 167 | | | | 167 |
| 0020 | 18+17.45 | 5.0' RT | 25+33.47 | 5.0' RT | | 684 | | | | 684 |
| 0020 | 18+50.00 | 5.0' RT | 18+50.00 | 24.0' RT | | | | | 19 | 19 |
| 0020 | 25+33.47 | 5.0' RT | 25+94.22 | 5.0' RT | | 61 | | | | 61 |
| 0020 | 25+34.00 | 5.0' RT | 35+34.00 | 36.0' RT | | | | | 31 | 31 |
| 0020 | 25+94.22 | 5.0' RT | 26+70.08 | 5.0' RT | | 76 | | | | 76 |
| 0020 | 102+97.28 | 9.1' RT | 103+02.26 | 14.1' RT | | | | | 7 | 12 |
| 0020 | 103+02.26 | 14.1' RT | 104+01.86 | 15.3' RT | | | | | 100 | 100 |
| 0020 | 104+01.86 | 15.3' RT | 104+18.56 | 18.2' RT | | | | | 17 | 17 |
| 0020 | 201+21.73 | 12.4' RT | 201+26.03 | 8.0' RT | | | | | 6 | 11 |
| 0020 | 201+26.03 | 8.0' RT | 201+87.58 | 8.0' RT | | | | | 62 | 62 |
| 0020 | 301+76.85 | 13.3' RT | 301+80.81 | 7.0' RT | | | | | 6 | 11 |
| 0020 | 301+80.81 | 7.0' RT | 301+89.48 | 7.0' RT | | | | 9 | | 9 |
| 0020 | 301+89.48 | 7.0' RT | 301+95.91 | 7.0' RT | | | | 7 | | 7 |
| 0020 | 301+95.91 | 7.0' RT | 301+95.90 | 24.2' RT | | | | | 18 | 18 |
| 0020 | 301+95.91 | 7.0' RT | 303+31.14 | 7.0' RT | | 135 | | | | 135 |
| 0020 | 303+31.14 | 7.0' RT | 304+50.00 | 7.0' RT | | 119 | | | | 119 |
| 0020 | 304+39.57 | 7.0' RT | 304+39.50 | 27.1' RT | | | 20 | | | 20 |
| 0020 | 304+39.50 | 27.1' RT | 304+39.44 | 47.2' RT | | | 20 | | | 30 |
| 0020 | 304+39.50 | 27.1' RT | 304+47.21 | 27.1' RT | | | | | 8 | 8 |
| 0020 | 304+39.57 | 7.0' RT | 304+51.42 | 7.0' RT | | 12 | | | | 12 |
| 0020 | 304+51.42 | 7.0' RT | 304+54.91 | 7.0' RT | | | | | 4 | 4 |
| 0020 | 304+54.91 | 7.0' RT | 304+62.37 | 14.6' RT | | | | | 11 | 16 |
| Project 1690-05-72 TOTAL | | | | | | 1625 | 40 | 16 | 319 | 2050 |

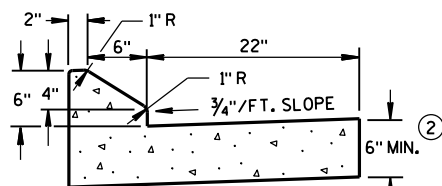
3

Standard Detail Drawing List

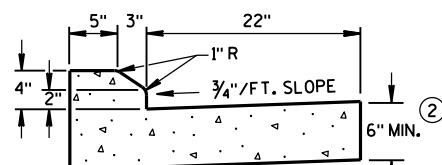
| | |
|-----------|---|
| 08D01-19 | CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES |
| 08E10-02 | INLET PROTECTION TYPE A, B, C AND D |
| 15C05-03 | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS |
| 15C08-16A | PAVEMENT MARKING (MAINLINE) |
| 15C12-04 | TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS) |
| 15C33-02 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15D12-06A | TRAFFIC CONTROL, LANE CLOSURE |
| 15D21-04 | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE |



TYPES A & D ①

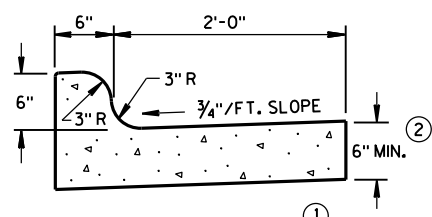


6" SLOPED CURB TYPES G & J ①



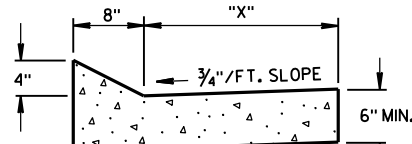
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



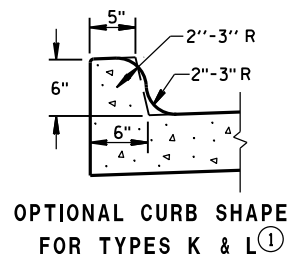
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

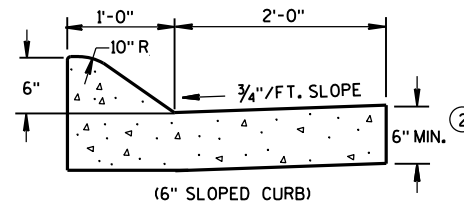


TYPES TBT & TBTT ①
CONCRETE CURB & GUTTER

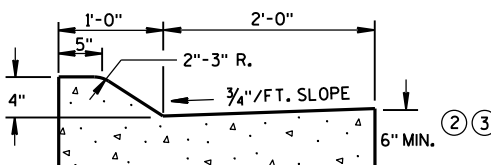
| TBT & TBTT | "X" |
|------------|-----|
| 30" | 22" |
| 36" | 28" |



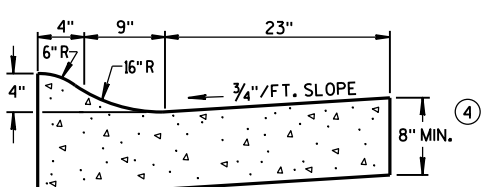
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)



(4" SLOPED CURB)
TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ⑤
CONCRETE CURB & GUTTER 36"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

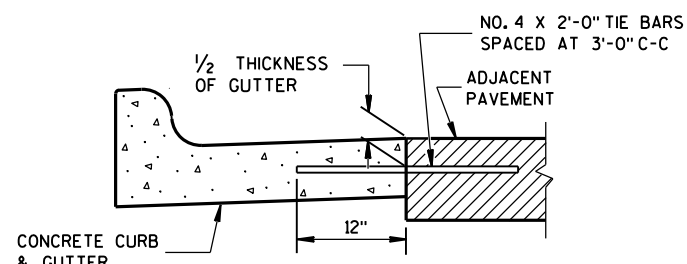
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

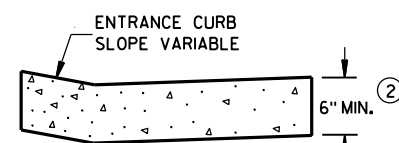
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

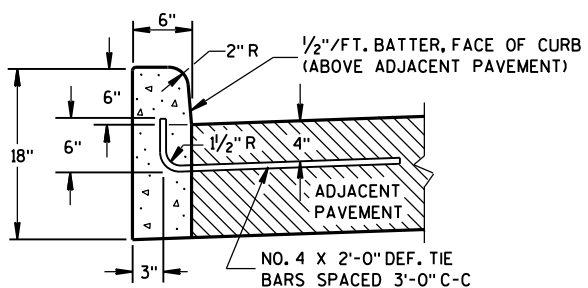
- TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



TYPICAL TIE BAR LOCATION ①

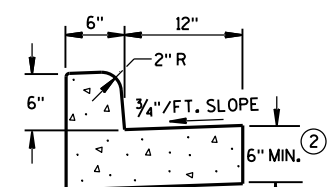


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

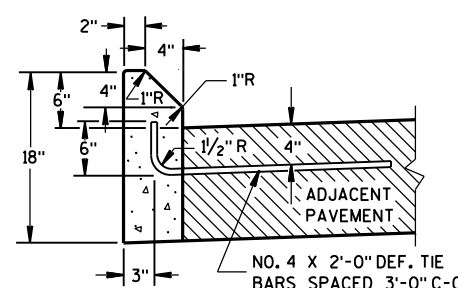


TYPES A & D ①

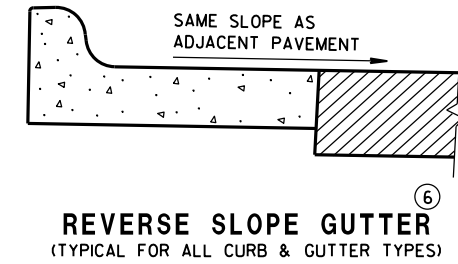
CONCRETE CURB



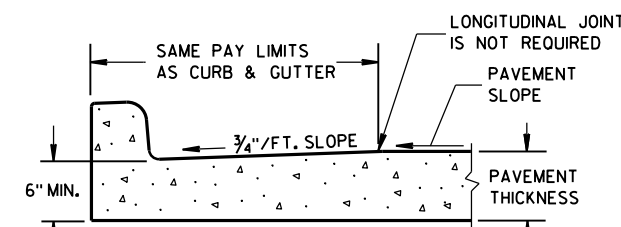
TYPES A & D
CONCRETE CURB & GUTTER 18"



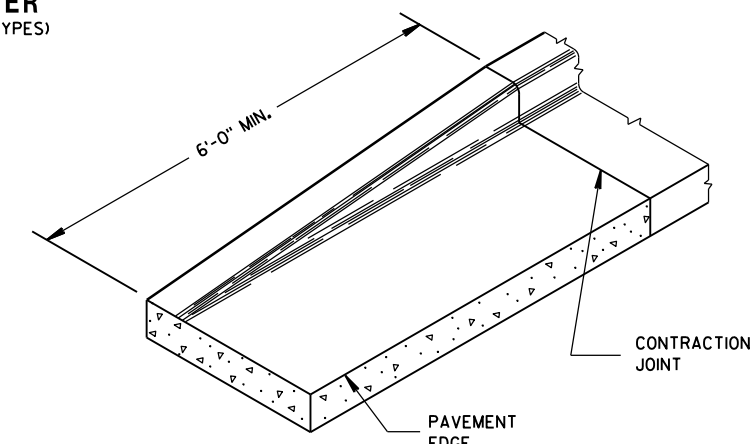
TYPES G & J ①



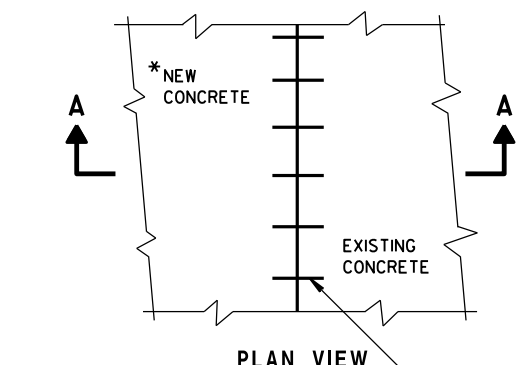
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



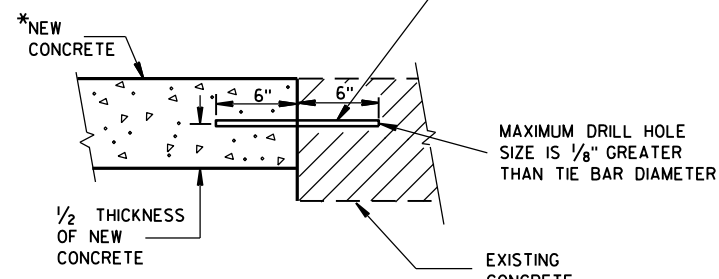
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING CONCRETE

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2016

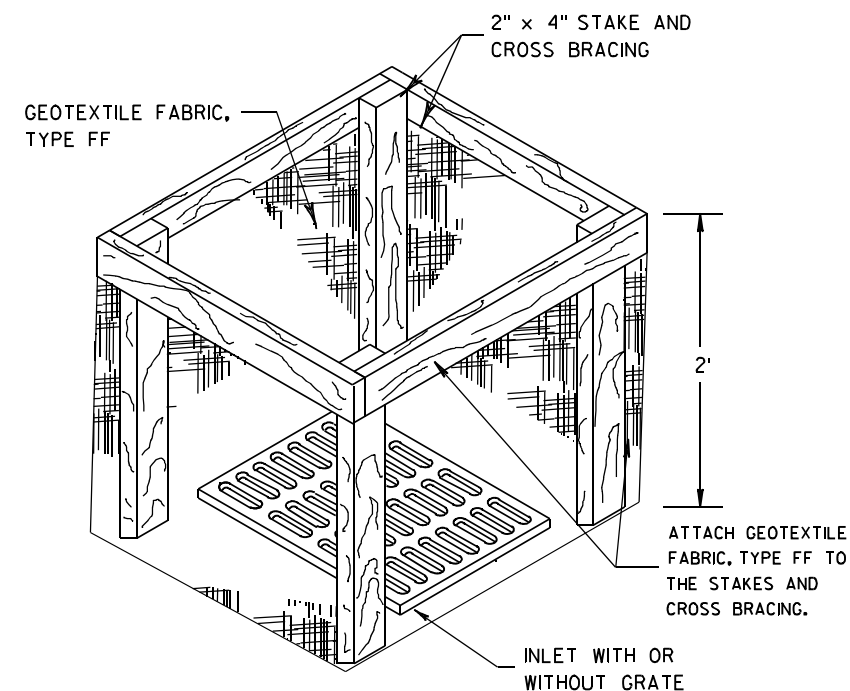
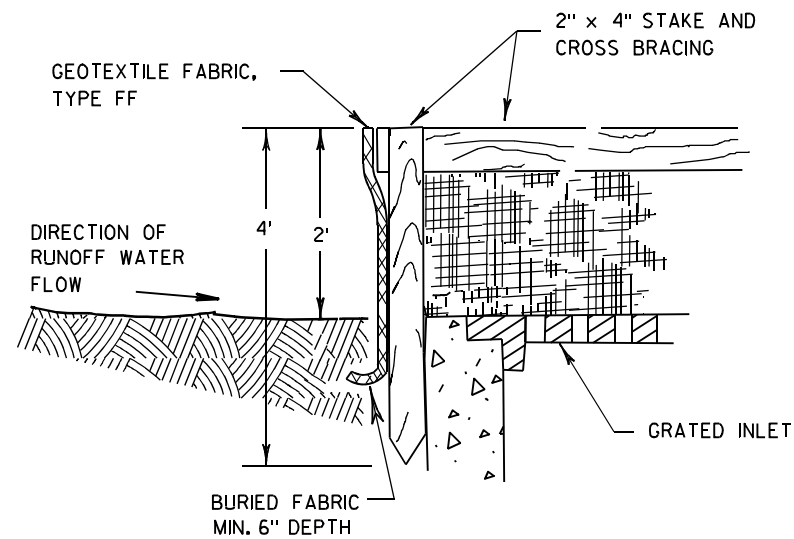
DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



INLET PROTECTION, TYPE A

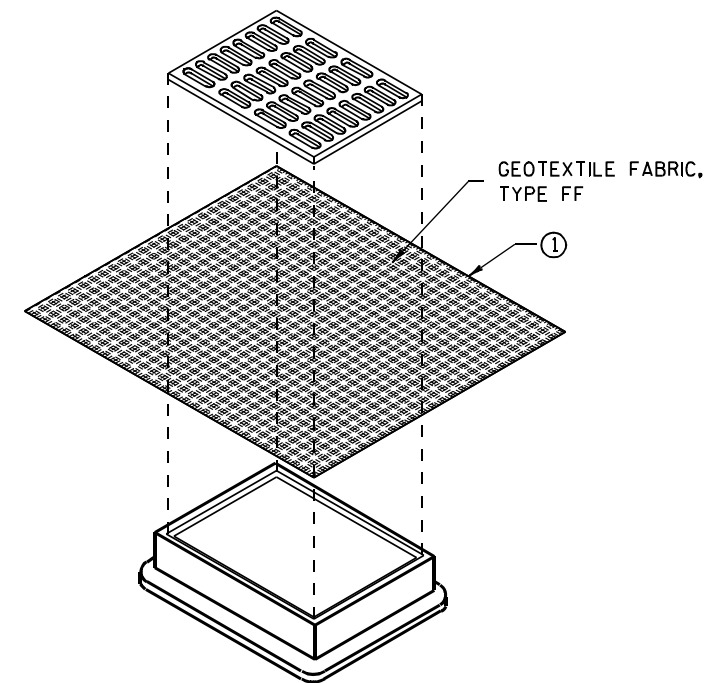
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE
DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE
SUBSTITUTED.

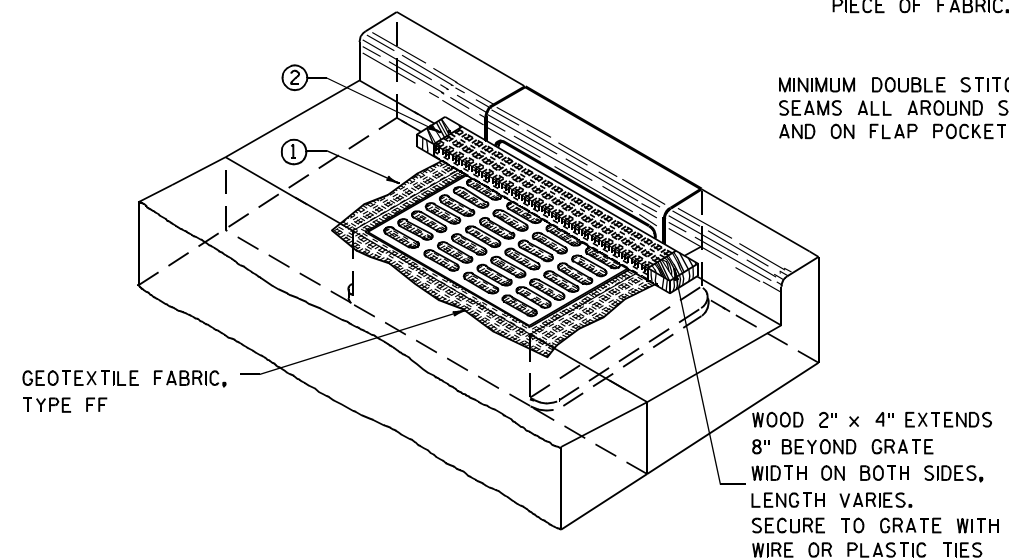
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

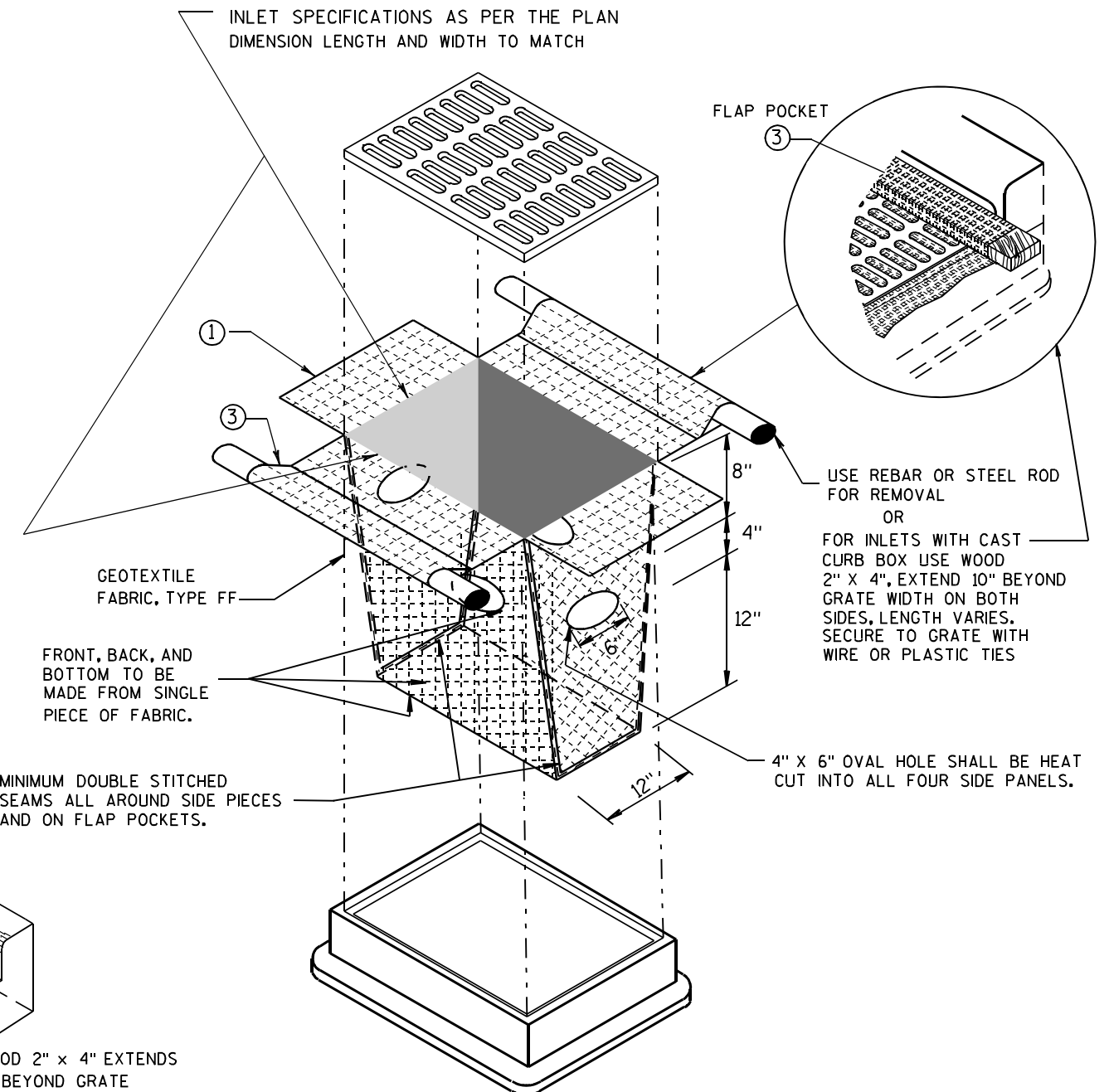
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE (2))

INLET PROTECTION TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

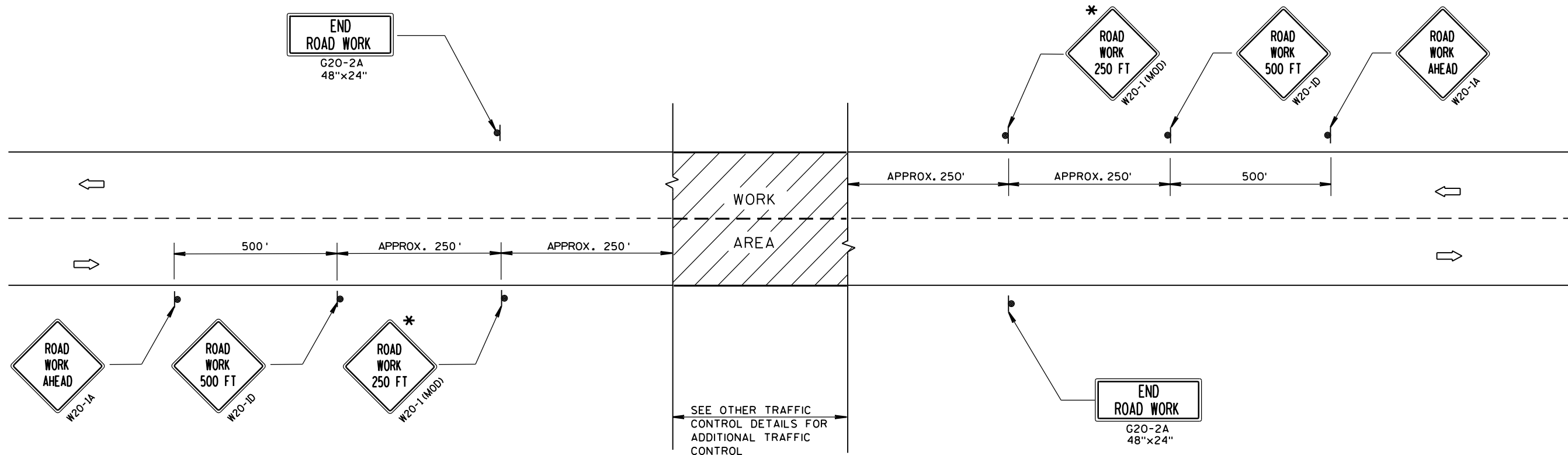
APPROVED

10/16/02
DATE

FHWA

/S/ Beth Cannestra

CHIEF ROADWAY DEVELOPMENT ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

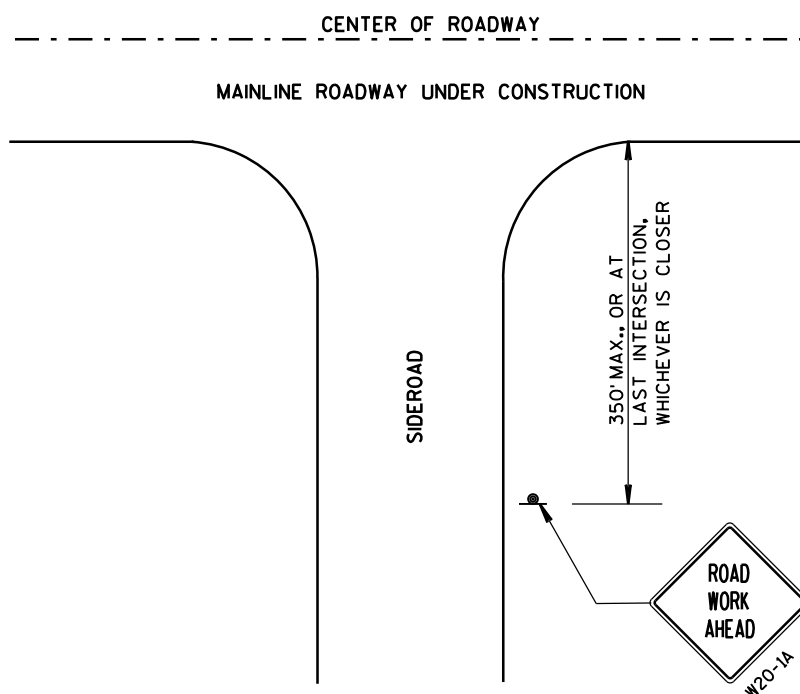
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



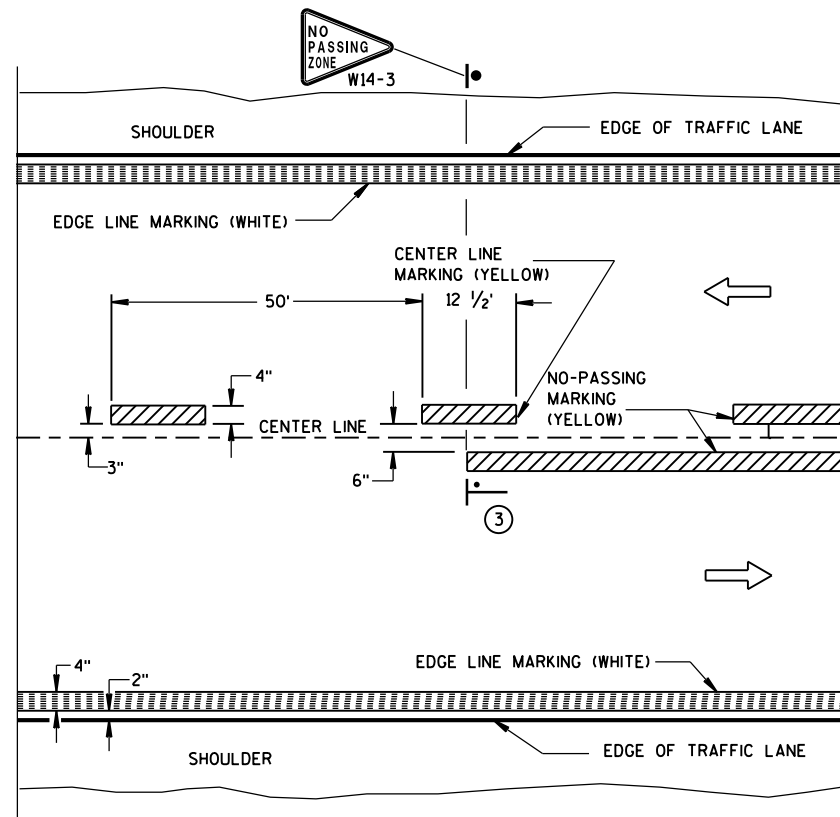
LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

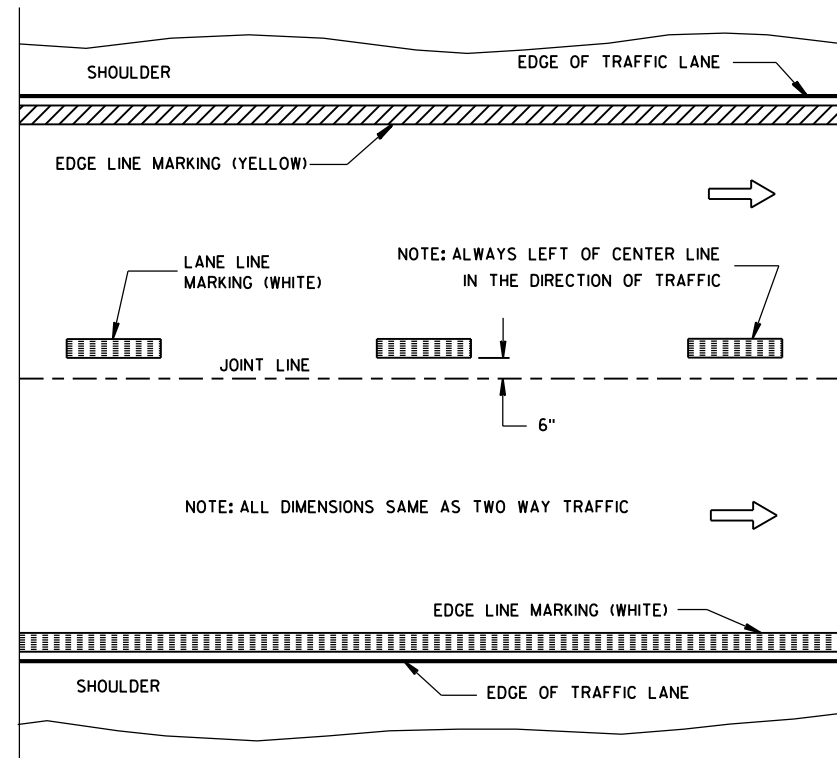
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

| | |
|--------------------------------|---|
| APPROVED Sept. 2015 DATE | /S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER |
| FHWA | |

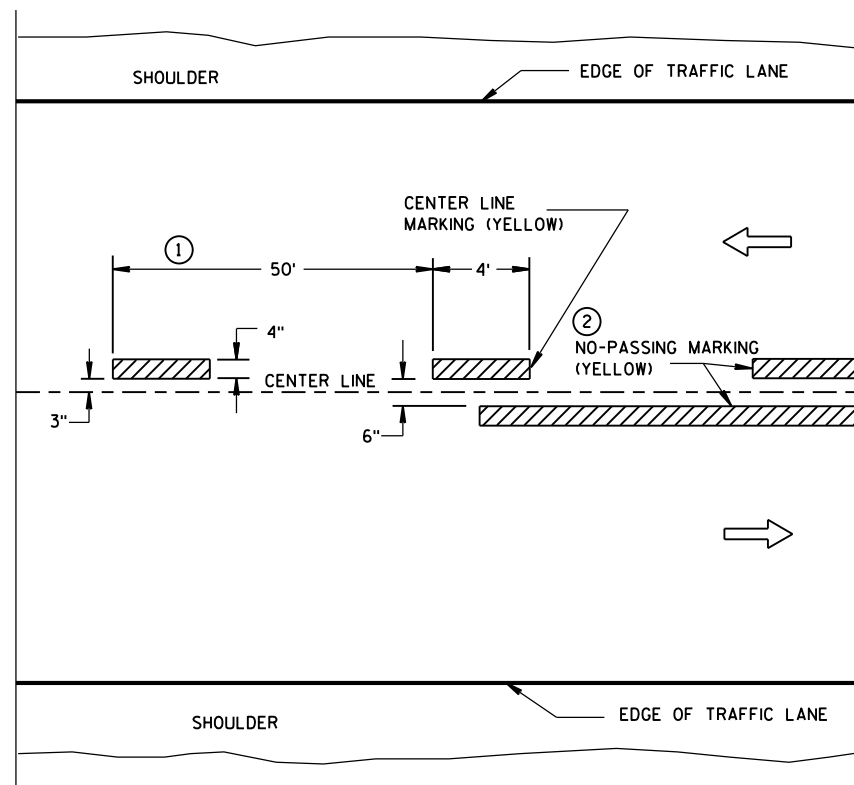


TWO WAY TRAFFIC

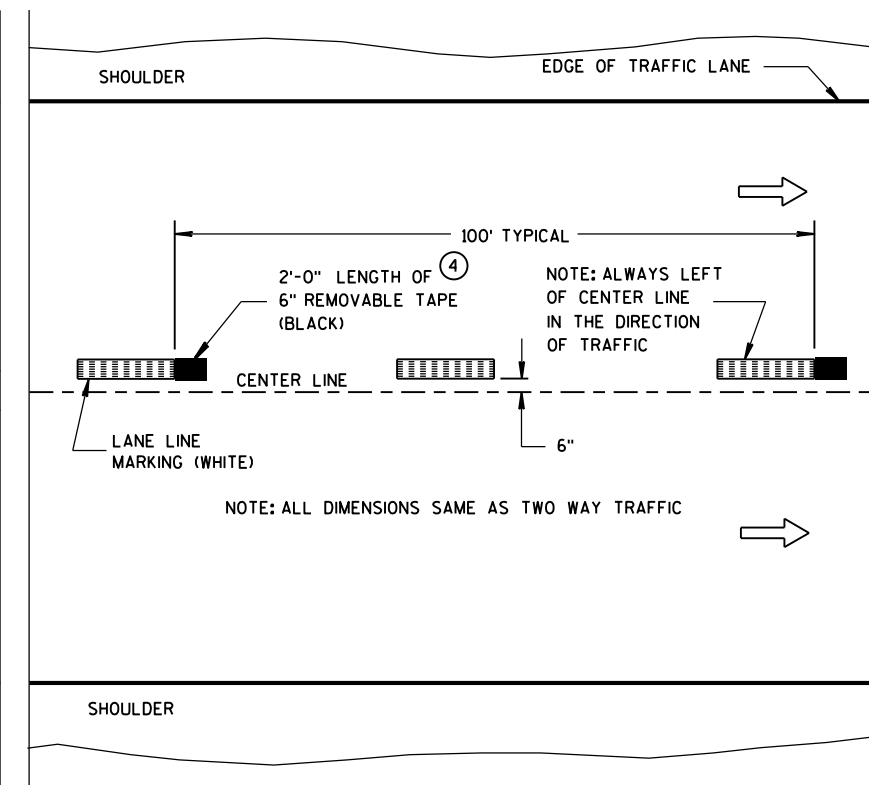


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

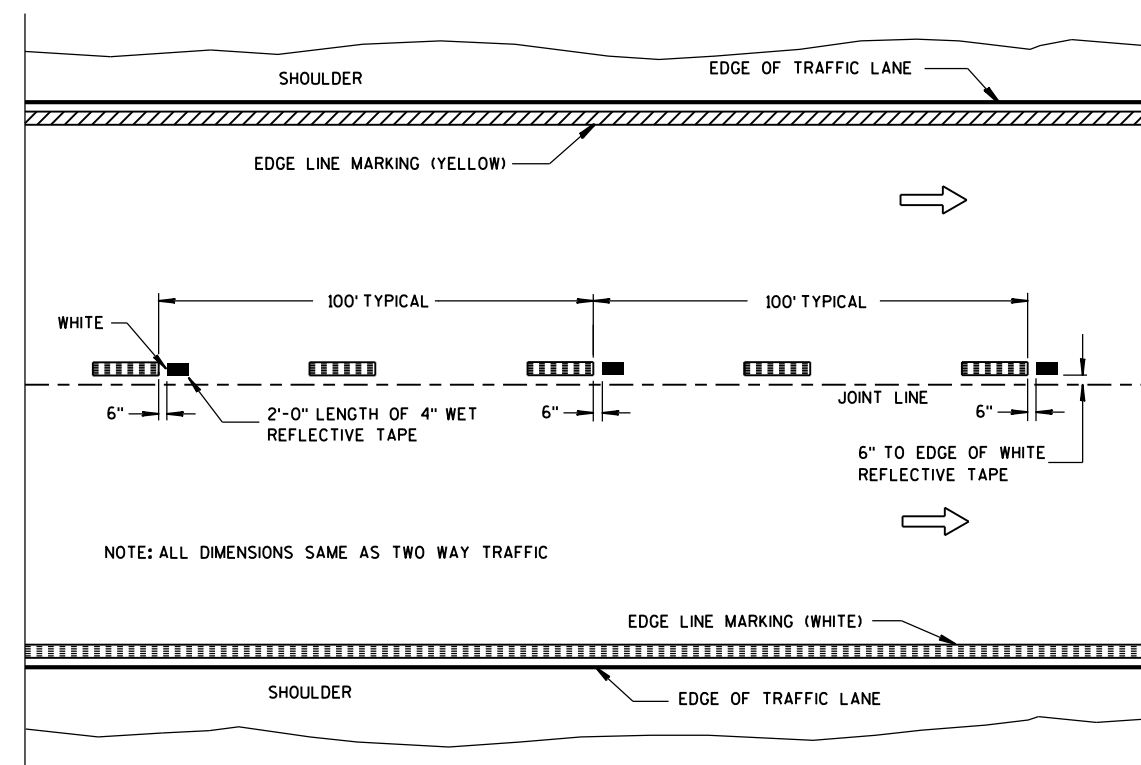
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013
DATE
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

LEGEND

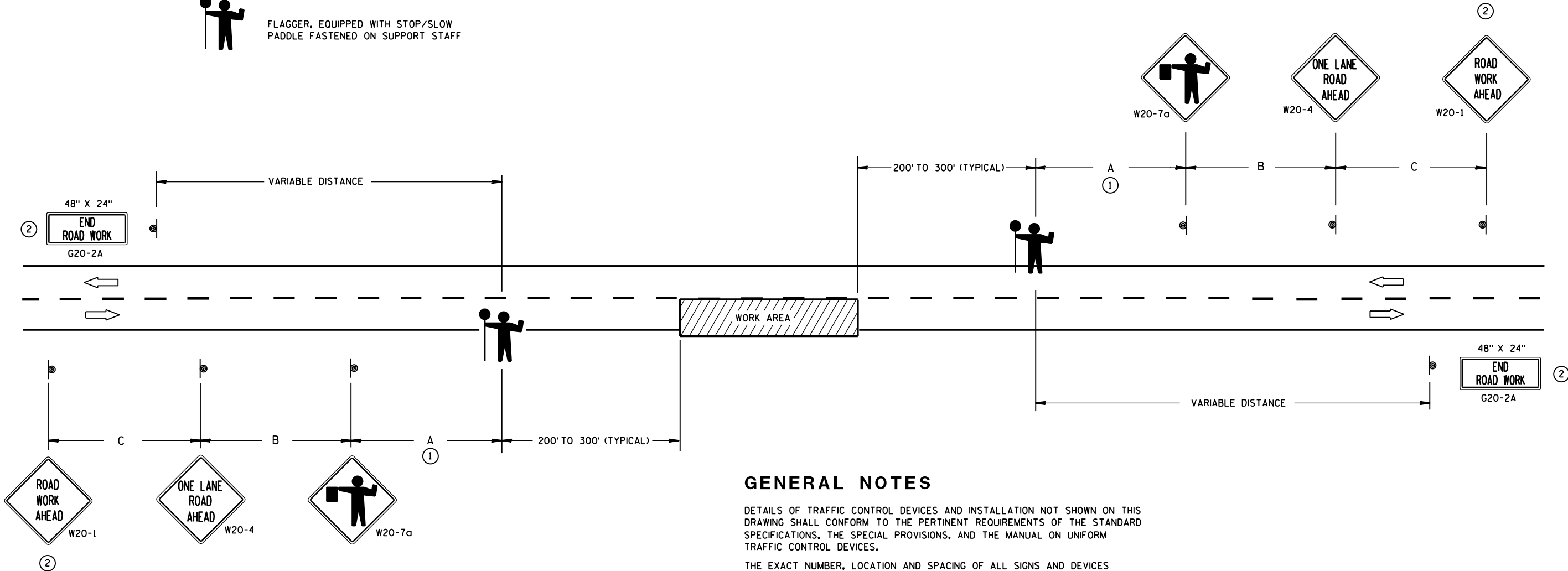
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

| SPEED LIMIT | SIGN SPACING A,B,C |
|-------------|-----------------------|
| 25-35 MPH | 200' |
| 35-40 MPH | 350' |
| 45-55 MPH | 500' |



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

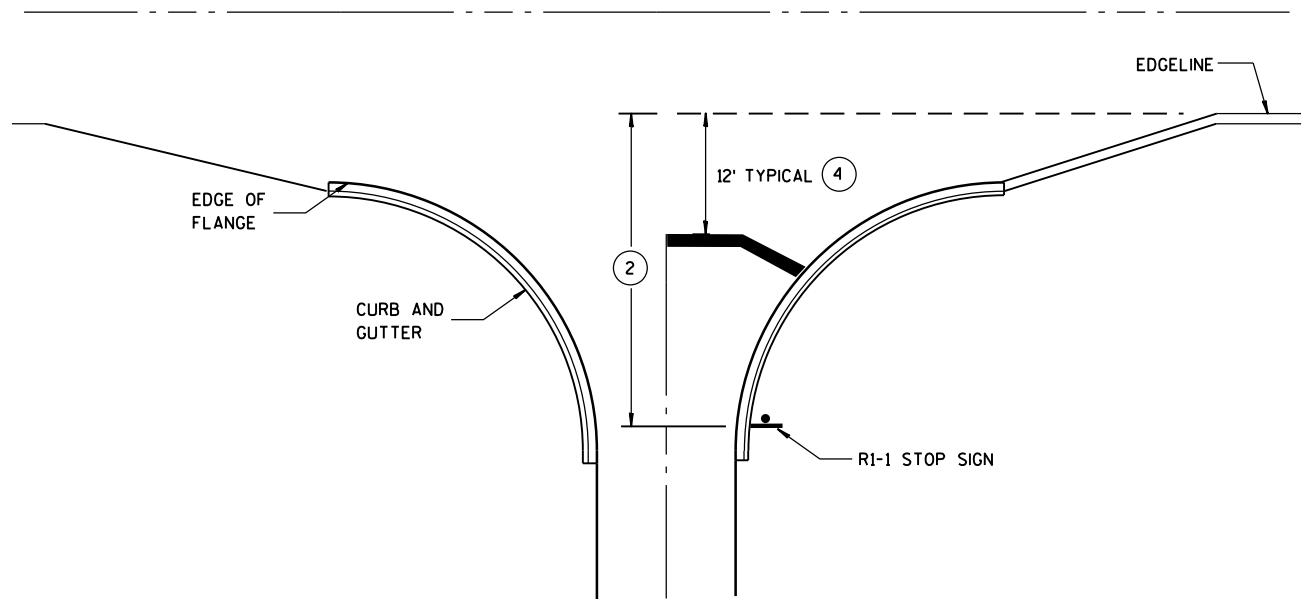
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

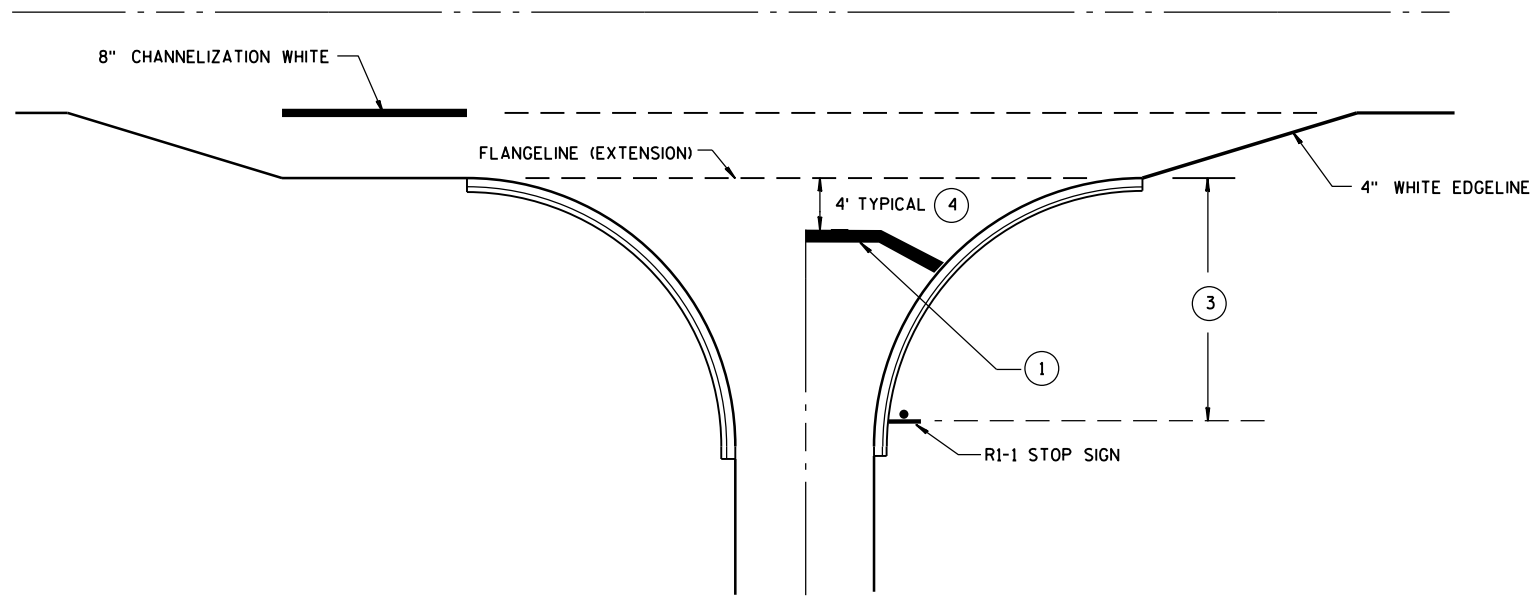
TRAFFIC CONTROL FOR LANE
CLOSURE (SUITABLE FOR
MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

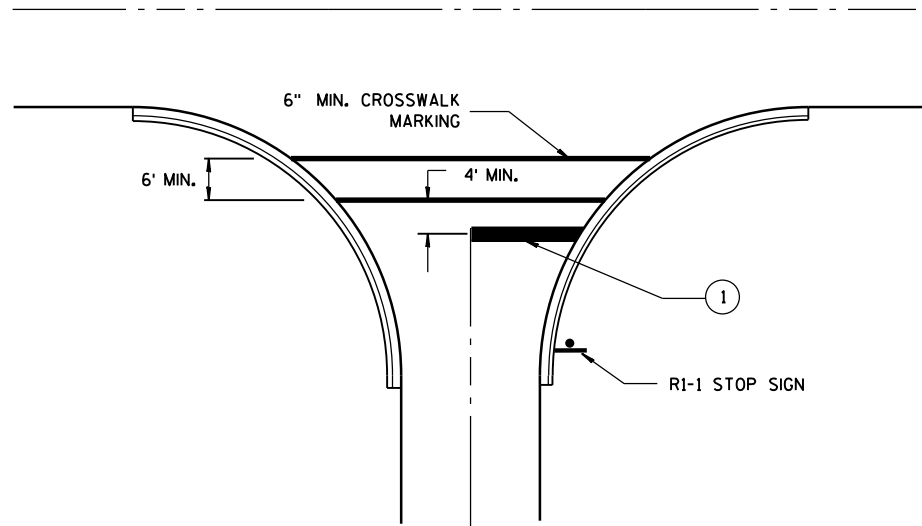
APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



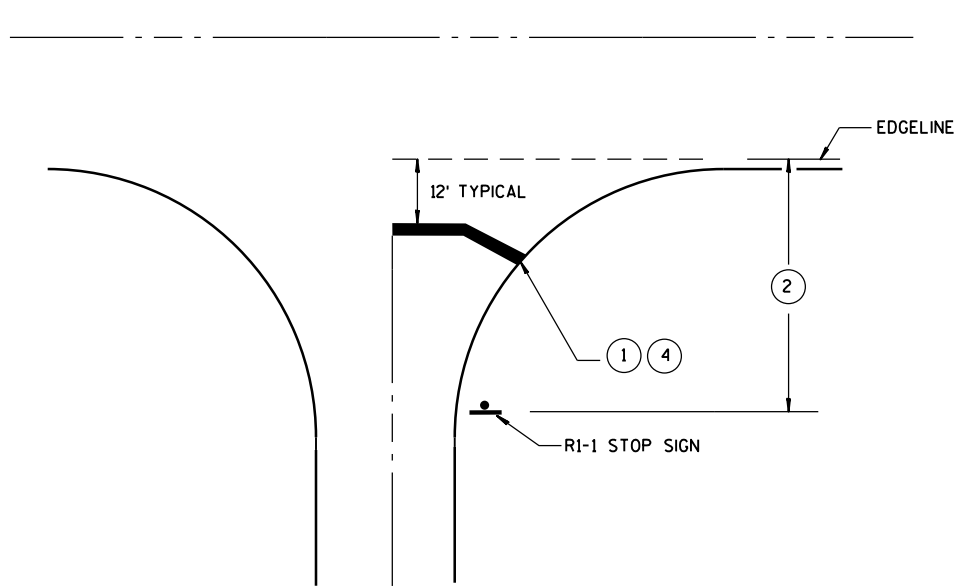
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

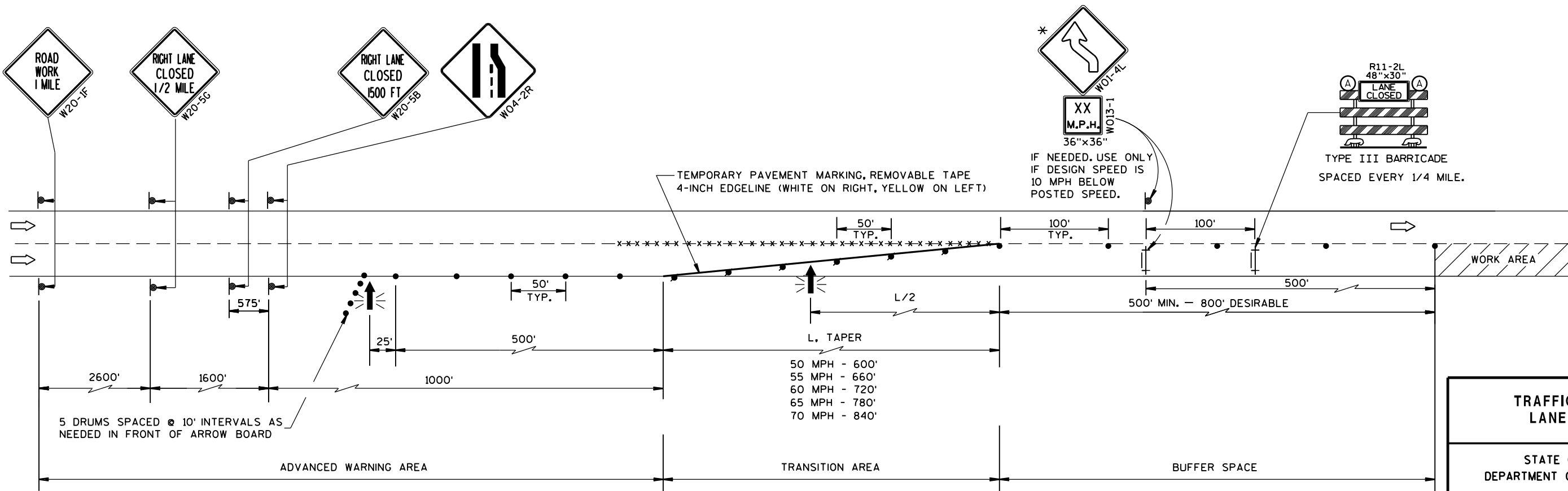
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

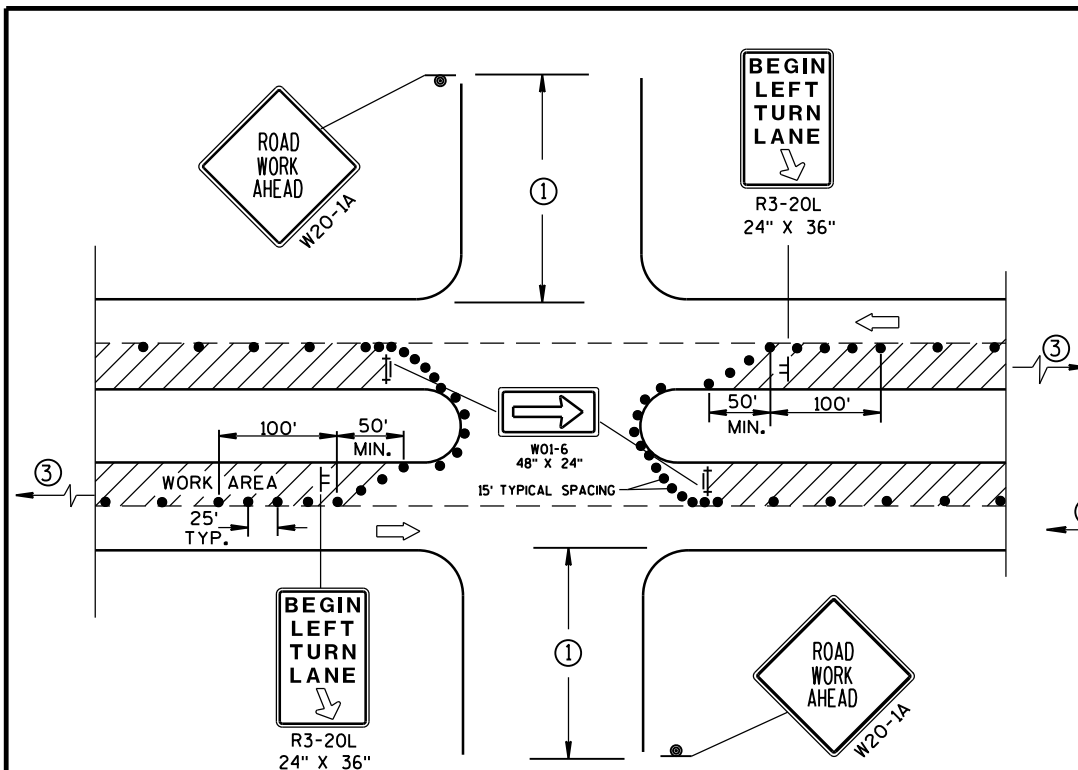
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

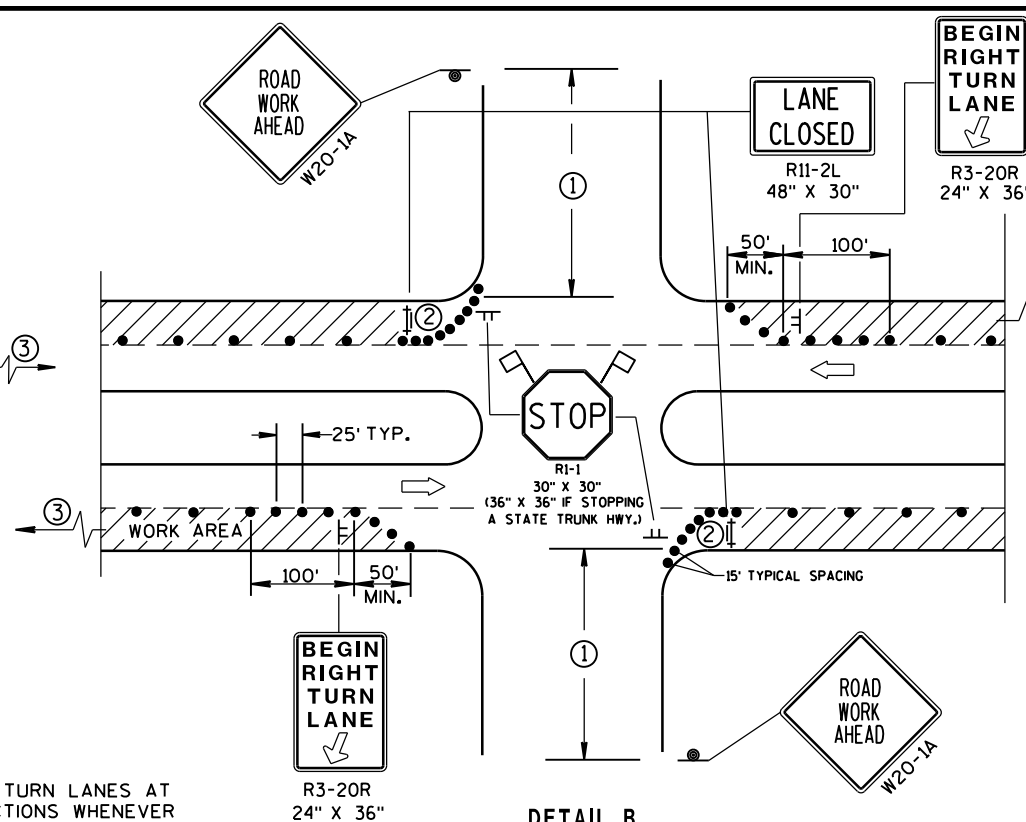


| | |
|--|---|
| TRAFFIC CONTROL, LANE CLOSURE | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED March 2016 DATE | /S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER |
| FHWA | |



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT
INTERSECTIONS WHENEVER
STAGING OF WORK ALLOWS.
TAPER AND TURN LANE
LENGTHS BASED ON FIELD
CONDITIONS AS APPROVED
BY THE ENGINEER.



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

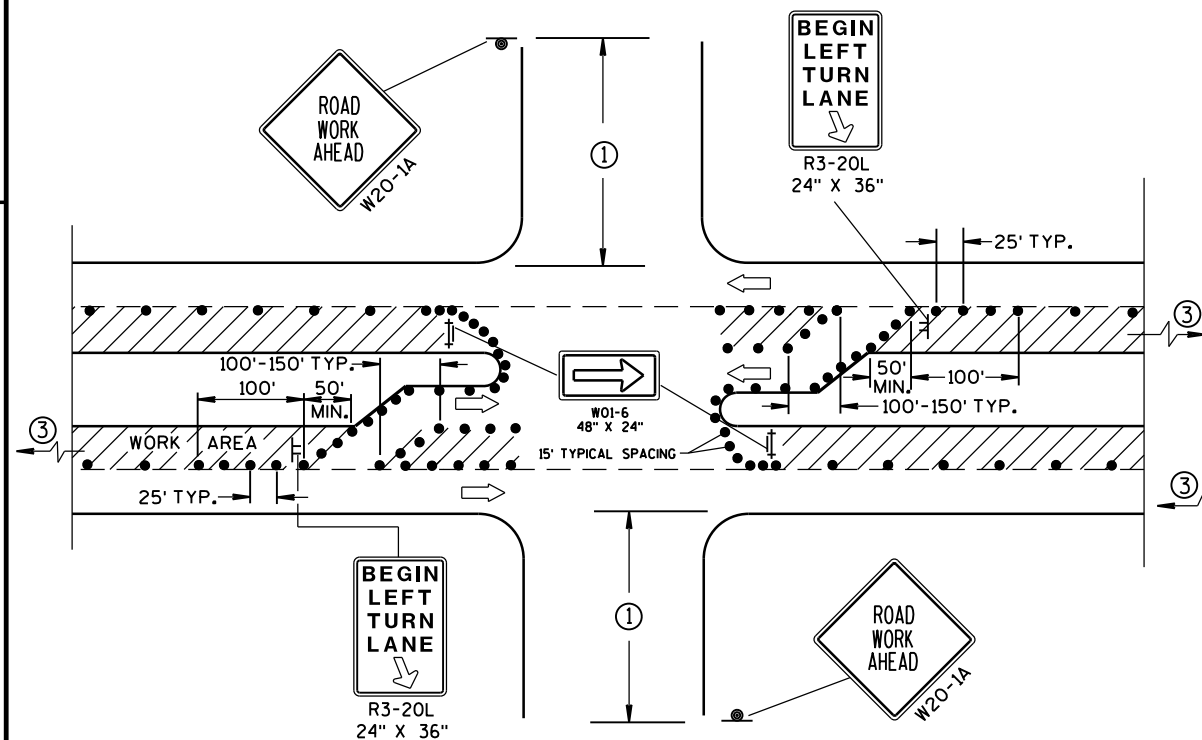
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

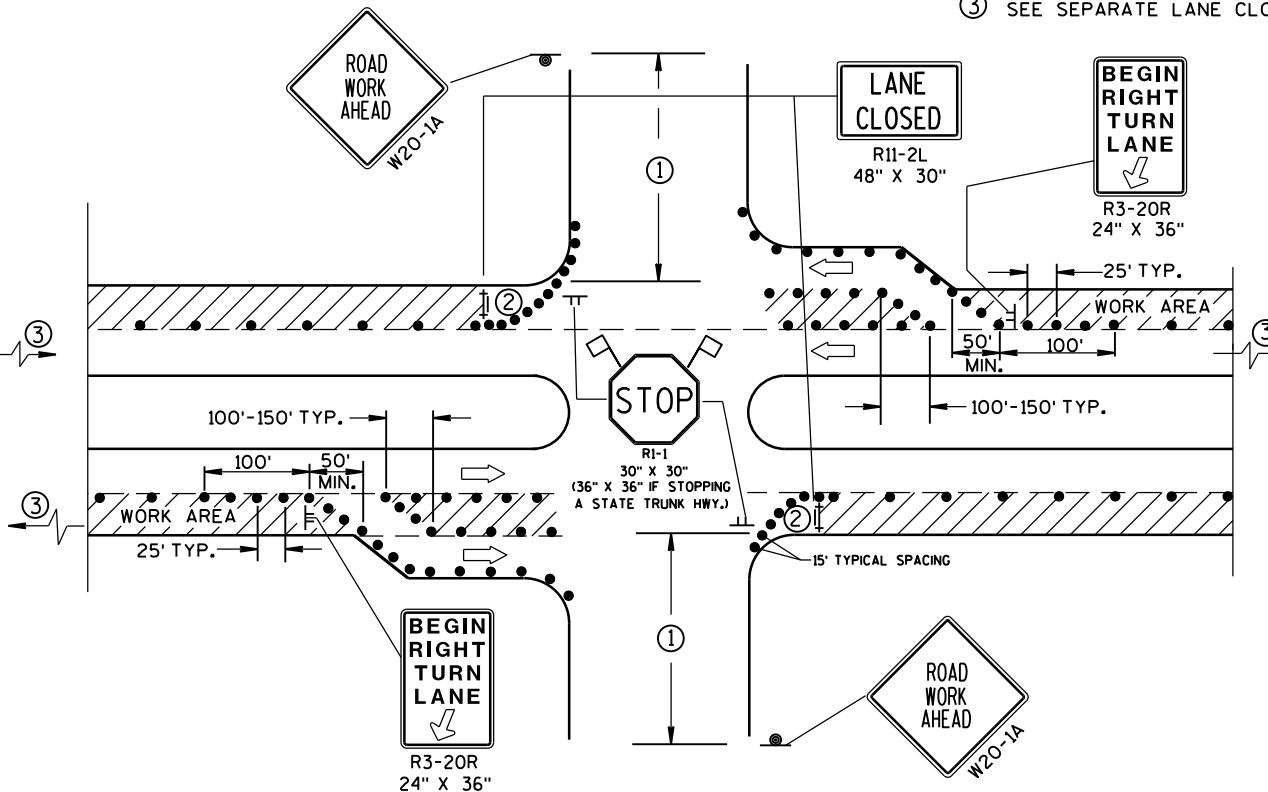
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ⚑ FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA



DETAIL C
FOR LEFT LANE CLOSURE AT INTERSECTION OR
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Anakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>