Madison, Wisconsin

CITY OF MADISON
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
PLAN OF PROPOSED IMPROVEMENT

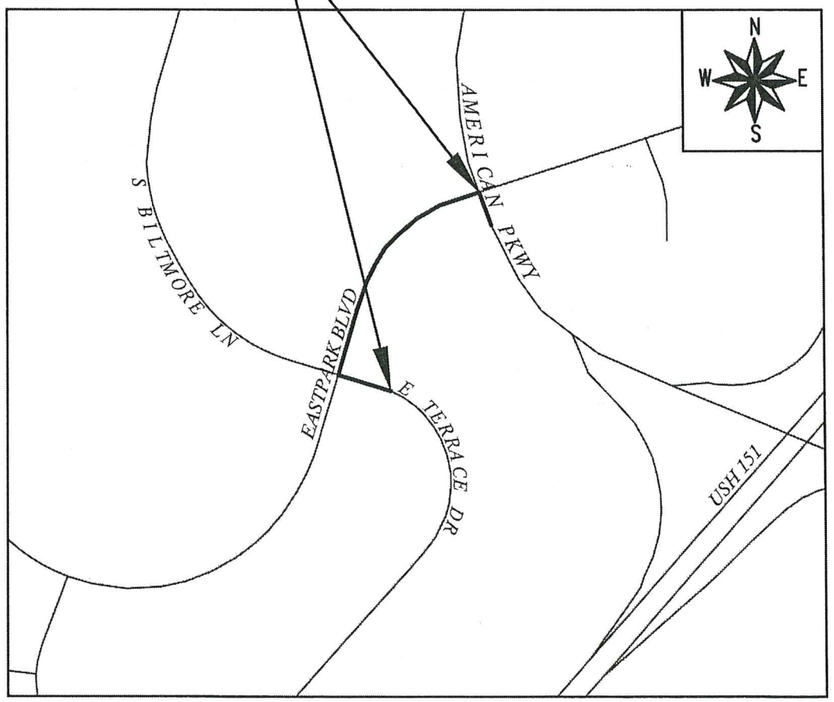
THE AMERICAN CENTER OUTLOT 7 CSM - 5401 EASTPARK BLVD.

CITY PROJECT NO. 12581
CONTRACT NO. 8362

INDEX OF SHEETS

THIS PLAN IS FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY ONLY

PROJECT LOCATION



PUBLIC IMPROVEMENT PROJECT APPROVED

APPROVED DATE: 4/30/2019

BY THE COMMON COUNCIL OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN APPROVED BY:

City Engineer — Date 11/25/19

STREET GEOMETRICS DESIGNED BY:

WISCONSIN — MARK S. WINTER — E-39463 — MADISON WI — PROFESSIONAL ENGINEER — 11/6/2019

STREET GRADES DESIGNED BY:

WISCONSIN — JOHN P. SAPP — 44054 — Janesville, WI — 11-4-19 — PROFESSIONAL ENGINEER

STORM SEWER CHANNEL REALIGNMENT OUTLOT 7 DESIGNED BY:

WISCONSIN — JASON P. LIETHA — E-35063 — COLUMBUS WI — PROFESSIONAL ENGINEER — 10-30-19

STORM SEWER ON AMERICAN PKWY. DESIGNED BY:

WISCONSIN — JANET SCHMIDT — E-34681 — MADISON WI — PROFESSIONAL ENGINEER — 11-21-19

SANITARY SEWER DESIGNED BY:

SEWER LATERALS ONLY (By Developer). MM 11/21/19

PLOT SCALE: 1:1
PLOT NAME: ----
REV. DATE: 10/30/2019 11:28 AM
ORIGINATOR: CITY_OF_MADISON

FILE NAME: \\Gisserver\d\DESIGN\Projects\12581\CAD\Plan Sheets\12581ENG-TI.dwg
DATE: 10/30/2019 11:30 AM

GENERAL NOTES

ALL GUTTERS SHALL DRAIN WITH A MINIMUM GRADES OF 0.5% TOWARD STORM SEWER INLETS.

ALL DITCHES SHALL DRAIN WITH A MINIMUM GRADES OF 0.5%

THE CROSS SLOPE OF SIDEWALKS AND BARRIER FREE SIDEWALK CURB RAMPS SHALL BE 1.5%. THE LONGITUDINAL GRADE OF BARRIER FREE SIDEWALK CURB RAMPS SHALL NOT EXCEED 8.33%. ALL SIDEWALK RAMPS SHALL BE CONSTRUCTED ACCORDING TO S.D.D. 3.03. AT ALL OTHER LOCATIONS THE LONGITUDINAL GRADE OF SIDEWALKS SHALL NOT EXCEED 5.0 % OR THE ADJACENT STREET GRADE WHICHEVER IS GREATER NOR BE LESS THAN 0.5% AND SHALL DRAIN TOWARD STORM SEWER INLETS. SIDE SLOPES WITHIN TEN FEET OF A PUBLIC SIDEWALK SHALL NOT EXCEED 4.00:1. ALL SIDEWALK AND SIDEWALK RAMP ELEVATIONS AND GRADES SHALL BE FIELD VERIFIED AND SET TO COMPLY WITH THE CITY OF MADISON STANDARD SPECIFICATIONS AND THE A.D.A. GUIDELINES.

OBTAIN A PRINT OUT OF THE ALIGNMENT FROM THE CITY ENGINEER PRIOR TO STAKING THIS PROJECT.

CURB STATION AND OFFSETS SHALL BE TO THE FACE OF CURB UNLESS OTHERWISE INDICATED. CURB ELEVATIONS SHALL BE TO THE TOP OF CURB (OR EXTENDED TOP OF CURB FOR DRIVEWAYS OR RAMPS) UNLESS OTHERWISE INDICATED.

POWER POLES AND OTHER OBSTRUCTIONS SHALL BE MOVED TO PROVIDE 2 FEET MINIMUM OF CLEAR DISTANCE FROM ANY FACE OF CURB OR EDGE OF SIDEWALK.

ANY INFORMATION SHOWN ON THIS PLAN, WHICH IS NOT PART OF THIS PROJECT, IS PRELIMINARY AND NOT FOR CONSTRUCTION.

THERE MAY BE EXISTING UTILITIES OR OTHER FEATURES WHICH ARE EITHER NOT SHOWN OR SHOWN INCORRECTLY ON THIS PLAN. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO LOCATE AND IDENTIFY ALL UTILITIES AND TOPOGRAPHY WHICH MAY AFFECT THE CONSTRUCTION OF THESE IMPROVEMENTS.

THE DEVELOPER SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING ANY REQUIRED RELOCATION OR ADJUSTING OF PRIVATE UTILITY FACILITIES, SUCH AS POLES, PEDESTALS, BOXES, STRUCTURES, CASTINGS OR MANHOLES, WITH PRIVATE UTILITY COMPANIES.

ALL PERMANENT SIGNING AND POSTING WILL BE DETERMINED AND PROVIDED BY THE TRAFFIC ENGINEERING DIVISION, FOLLOWING CONSTRUCTION OF THESE IMPROVEMENTS.

THE DEVELOPER SHALL PROVIDE, INSTALL AND MAINTAIN ALL STREET END BARRICADES, SIGNING AND TRAFFIC CONTROL, AS REQUIRED BY THE CITY TRAFFIC ENGINEER.

PAVEMENT SAWCUTS SHALL BE AS DIRECTED BY THE CITY CONSTRUCTION ENGINEER. SAWCUTS SHOWN ON THE PLAN ARE APPROXIMATE.

CONTRACTOR/DEVELOPER SHALL SUBMIT A TRAFFIC CONTROL PLAN TO CITY TRAFFIC ENGINEERING AT LEAST 10 WORKING DAYS PRIOR TO THE START OF WORK. WORK WITHIN THE RIGHT-OF-WAY SHALL NOT BEGIN UNTIL THE TRAFFIC CONTROL PLAN IS APPROVED.

ANY PAVEMENT MARKINGS THAT ARE REMOVED OR DAMAGED SHALL BE REPLACED BY THE DEVELOPER/CONTRACTOR AS DIRECTED BY CITY TRAFFIC ENGINEERING.

ALL PAVEMENT SHALL BE PATCHED IN ACCORDANCE WITH CITY PAVEMENT PATCHING CRITERIA AND SHALL BE ACCOMPLISHED AS DIRECTED BY THE CITY CONSTRUCTION ENGINEER.

ALL DISTURBED TERRACE AREAS SHALL BE RESTORED WITH 4-INCHES OF TOPSOIL, SEED, AND EROSION MAT UNLESS DIRECTED OTHERWISE ON THE PLAN OR BY THE CITY CONSTRUCTION ENGINEER.

CONVENTIONAL SIGNS
FIELD VERIFY ALL UTILITY LOCATIONS

GAS	G
STORM SEWER	ST
SANITARY SEWER	SAN
WATER	W
BURIED ELECTRIC	E
OVERHEAD ELECTRIC	OH
POWER POLE	
ADA COMPLIANT RAMP W/ DETECTABLE WARNING FIELD	
COMBUSTIBLE FLUIDS	

PAVEMENT PATCHING CRITERIA

CRITERIA USE ON:
STREETS WITH PAVEMENT RATING > 6
ARTERIAL STREETS

1. LENGTH OF PATCH

1.1. MINIMUM 50 FEET LONG
1.2. MINIMUM OF 15 FEET BEYOND THE EXCAVATION
1.3. WHERE MULTIPLE PATCHES ARE CREATED AND THE SEPARATION BETWEEN THEM IS LESS THAN 100 FEET, THE PATCHES SHALL BE COMBINED INTO A SINGLE PATCH.
1.4. THE PATCHS SHALL BE ADJUSTED IN THE FIELD TO MEET SPECIAL CONDITIONS SUCH AS PREVIOUS PAVING OR PATCHING LIMITS.

2. WIDTH OF PATCH (ALL DIMENSIONS ARE CURB FACE TO FACE)

2.1. ALL STREETS EXCEPT DIVIDED OR ONE-WAY ROADWAYS
2.1.1. STREET WIDTH OF 0 - 24 FEET WIDE: PATCH ENTIRE STREET WIDTH
2.1.2. STREET WIDTH OF 25 TO 37 FEET WIDE: PATCH ONE-HALF THE STREET WIDTH (CURB TO CENTERLINE OF ROADWAY). NOTE: UTILITY ENGINEER MAY ADJUST PAVING LIMIT TO CORRESPOND WITH A PAINTED CENTERLINE IN SITUATIONS WHERE THE PAINTED CENTERLINEIS NOT IN THE CENTER OF THE STREET.
2.1.3. STREET WIDTH 38 FEET AND UP: PATCH WIDTH OF ENTIRE LANE FOR EACH LANE WHICH WAS DISTURBED BY THE EXCAVATION.
2.1.3.1. IF THE LANE IS ADJACENT TO A BIKE LANE, INCLUDE THE BIKE LANE (EXCEPT WHEN THERE IS A PARKING LANE BETWEEN THE BIKE LANE AND THE CURB).
2.1.3.2. IF THE LANE IS A BIKE LANE AND ADJACENT TO A PARKING LANE, INCLUDE THE PARKING LANE.
2.1.3.3. IF THE LANE IS A BIKE LANE AND NOT ADJACENT TO A PARKING LANE, INCLUDE THE ADJACENT TRAVEL LANE.

2.2. DIVIDED ROADWAYS AND ONE-WAY STREETS
2.2.1. STREET 0 TO 19 FEET WIDE: PATCH ENTIRE STREET WIDTH.
2.2.2. STREET WIDTH 20 FEET AND UP: PATCH WIDTH OF ENTIRE LANE FOR EACH LANE WHICH WAS DISTRUBED BY THE EXCAVATION.
2.2.2.1. IF THE LANE IS ADJACENT TO A BIKE LANE, INCLUDE THE BIKE LANE (EXCEPT WHEN THERE IS A PARKING LANE BETWEEN THE BIKE LANE AND THE CURB).
2.2.2.2. IF THE LANE IS A BIKE LANE AND ADJACENT TO A PARKING LANE, INCLUDE THE PARKING LANE.
2.2.2.3. IF THE LANE IS A BIKE LANE AND NOT ADJACENT TO A PARKING LANE, INCLUDE THE ADJACENT TRAVEL LANE.

STREET RATINGS		
STREET NAME	CLASSIFICATION	PAVEMENT RATING
AMERICAN PKWY	ARTERIAL	6
EASTPARK BLVD	COLLECTOR	6
EAST TERRACE DR	LOCAL	8

CITY OF MADISON MINIMUM PAVEMENT DESIGN						
TYPE	CRUSHED AGGREGATE BASE COURSE		ASPHALTIC CONCRETE PAVEMENT			
	LOWER LAYER GRADATION 1	UPPER LAYER GRADATION 2	LOWER LAYER		UPPER LAYER	
			TYPE	THICKNESS	TYPE	THICKNESS
A	6"	6"	4 LT 58-28 S	1.75"	4 LT 58-28 S	1.75"
B	6"	6"	3 LT 58-28 S	2.50"	4 LT 58-28 S	2.00"
C	6"	6"	3 MT 58-28 S/H 3 HT 58-28 H	3.50"	4 MT 58-28 S/H 4 HT 58-28 H	2.00"

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MADISON, MADISON, WI

CONTRACT NO: 8362

GENERAL NOTES
THE AMERICAN CENTER OUTLOT 7
CITY OF MADISON

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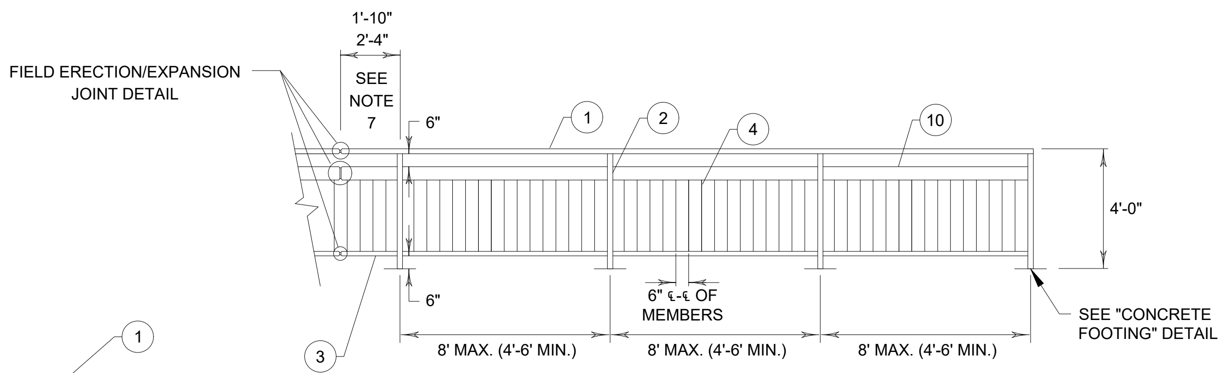
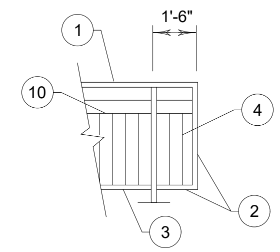
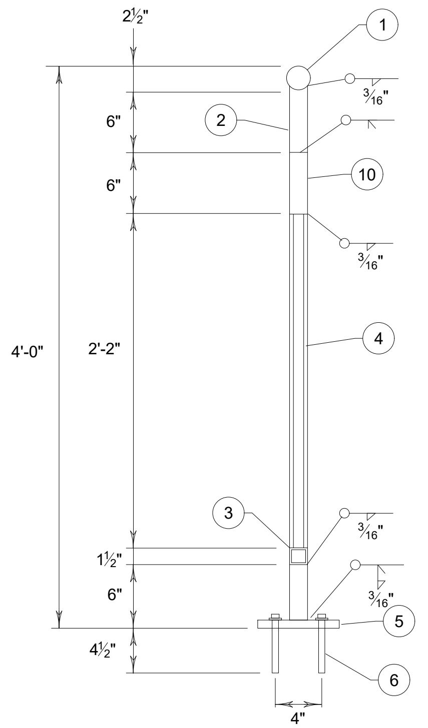


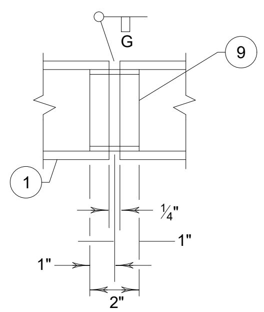
RAILING LAYOUT DETAIL



END SECTION

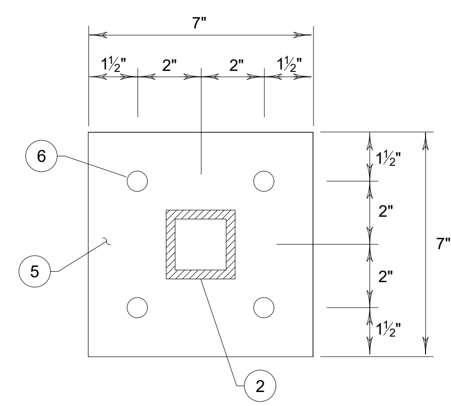


SECTION THRU RAILING

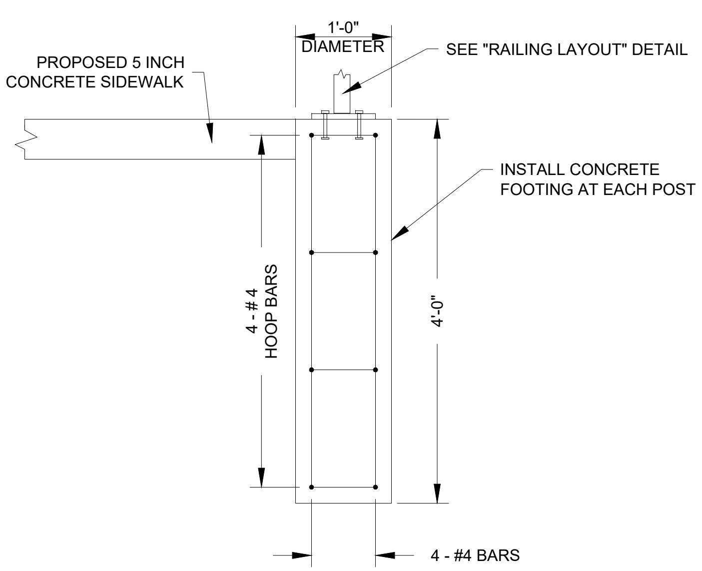


SHOP RAIL SPLICE DETAIL

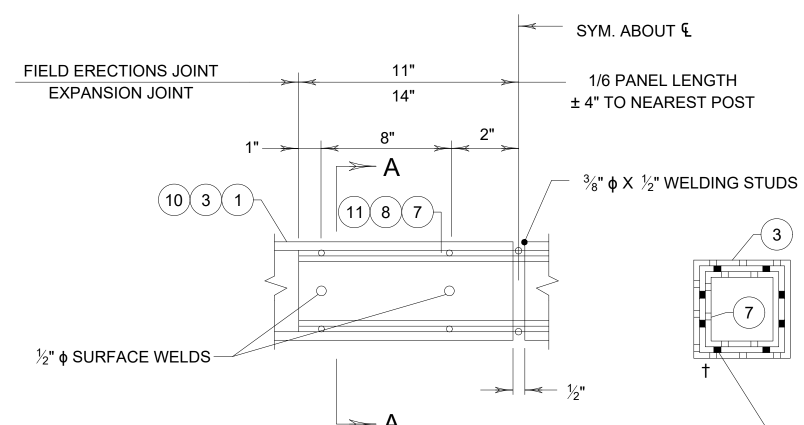
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



RAILING BASE PLATE

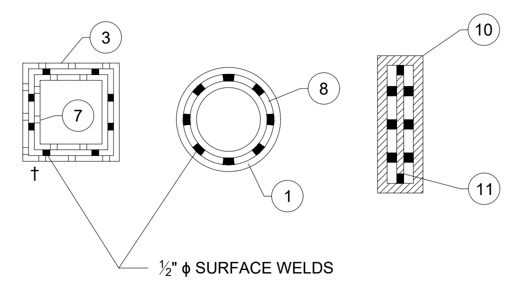


CONCRETE FOOTING DETAIL



FIELD ERECTION JOINT DETAIL

† MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE



SECTION A-A

RAILING STEEL DETAIL

STA 20+22.90 - STA 20+56.09

LEGEND

1. 2 ½" DIA. STEEL PIPE CONFORMING TO SECTION 506 OF THE STANDARD SPECIFICATIONS.
2. TS 2" X 2" X 0.188" STRUCTURAL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B. CUT BOTTOM OF POST TO MATCH SLOPE OF TOP OF WALL. HOLD 1/16" ABOVE BASE PLATE TO ALLOW POST AND BASE PLATE TO BE WELDED TOGETHER. PLACE POST VERTICAL AND CENTERED ON THE BASE PLATE.
3. TS 1 ½" X 1 ½" X 0.188" STRUCTURAL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B.
4. TS 1" X 1" X 0.125" STRUCTURAL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B.
5. BASE PLATE ½" X 7" X 7" CONFORMING TO ASTM DESIGNATION A709 GRADE 36 WITH 9/16" HOLES FOR HEX BOLTS NO. 6, WELD TO NO. 2 AS SHOWN.
6. CONCRETE MASONRY ANCHORS, TYPE S, ⅝". PULLOUT STRENGTH SHALL BE 3.6 KIPS.
7. SQUARE SLEEVE FABRICATED FROM ½" COLD DRAWN STEEL ALLOY SQUARE CONFORMING TO ASTM A331 X 2'-4" LONG AT EXPANSION JOINTS AND 1'-10" LONG AT FIELD JOINTS. PROVIDE ½" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 3. PROVIDE ⅜" DIA. X ½" WELDING STUDS ON TOP AND BOTTOMS SURFACES AT CENTERLINE.
8. 1 ½" DIA. STEEL PIPE CONFORMING TO SECTION 506 OF THE STANDARD SPECIFICATIONS X 2'-4" LONG AT EXPANSION JOINTS AND 1'-10" LONG AT FIELD JOINTS. PROVIDE ½" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 1. PROVIDE ⅜" DIA. X ½" WELDING STUDS ON TOP AND BOTTOMS SURFACES AT CENTERLINE.
9. 2" DIA. PIPE SLEEVE CONFORMING TO SECTION 506 OF THE STANDARD SPECIFICATIONS. PROVIDE "SLIDING FIT".
10. TS 6" X 2" X 0.188" STRUCTURAL TUBING CONFORMING TO ASTM DESIGNATION A501 OR A500 GRADE B.
11. 1" X 5" SLEEVE CONFORMING TO ASTM DESIGNATION A709 GRADE 36 X 2'-4" LONG AT EXPANSION JOINTS OR 1'-10" LONG AT FIELD JOINTS. PROVIDE ½" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 10. PROVIDE ⅜" DIA. X ½" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

NOTES

BID ITEM SHALL BE "RAILING STEEL" WHICH INCLUDES ALL ITEMS SHOWN INCLUDING GALVANIZED COATING.

RAILING SHALL BE FABRICATED IN 2 OR 3 PANEL LENGTHS.

POST BASE PLATES NO. 5 SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL MATERIALS EXCEPT ANCHOR BOLTS NO. 6 SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS, STEEL TUBING, AND STEEL PIPE SHALL BE GIVEN A NO. 6 BLAST CLEANING PER S.S.P.C. SPECIFICATIONS.

VERTICAL MEMBERS SHALL BE PLUMB.

HORIZONTAL MEMBERS SHALL PARALLEL GRADE.

CONCRETE FOOTING CONSTRUCTION IS INCIDENTAL TO RAILING STEEL ITEM CONSTRUCTION.

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MADISON, MADISON, WI

CONTRACT NO: 8362

CONSTRUCTION DETAILS

THE AMERICAN CENTER OUTLOT 7

CITY OF MADISON

12581

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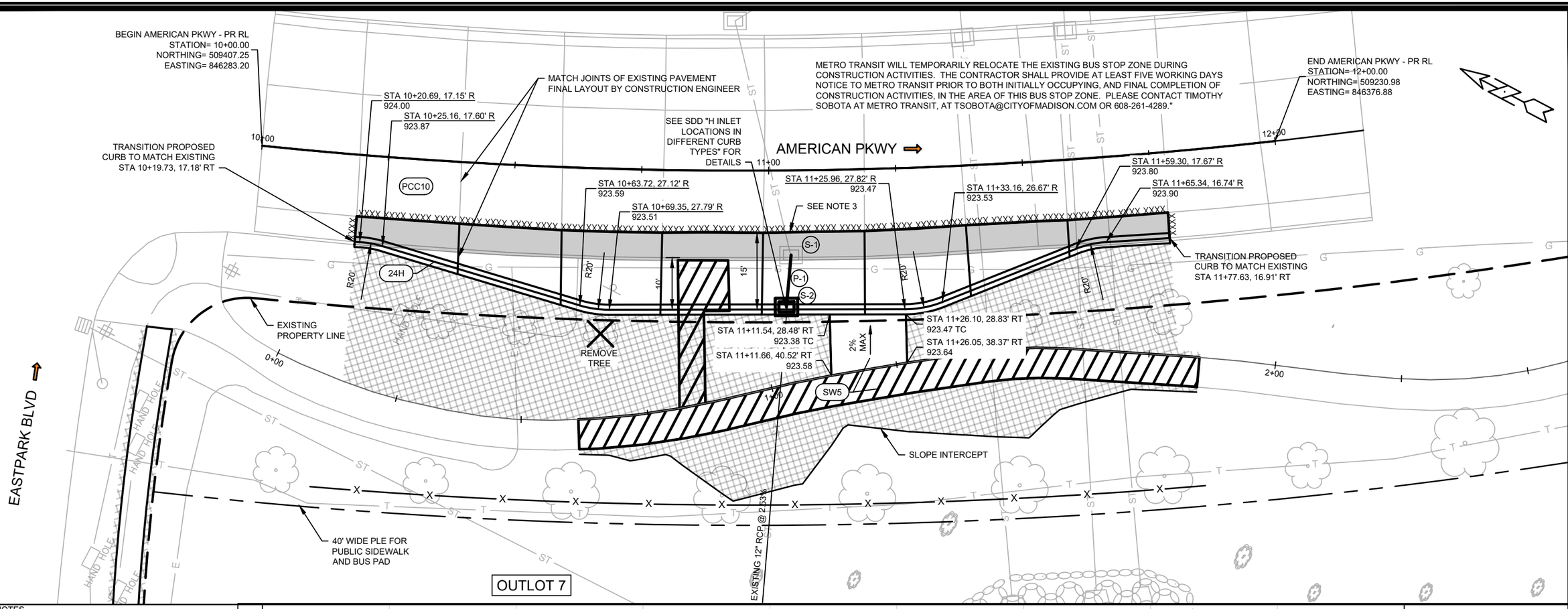
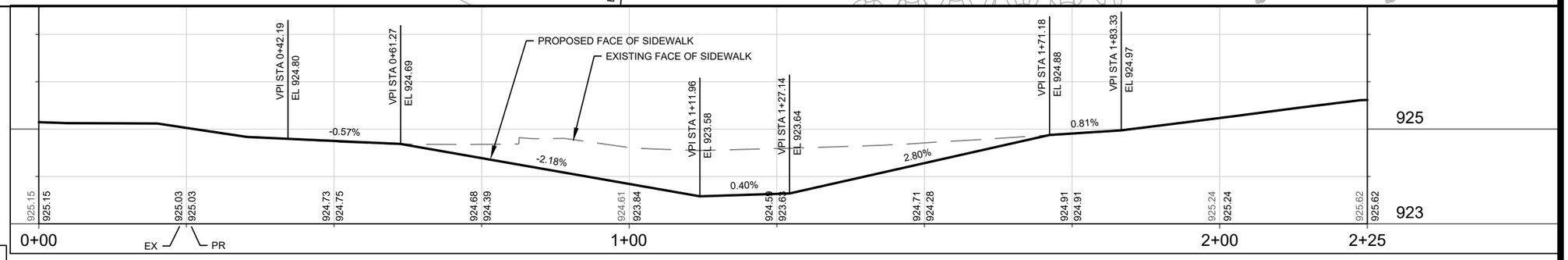


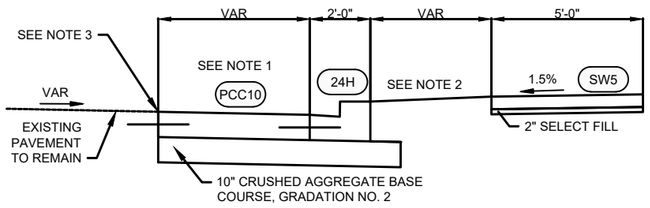


NOTES

1. CONSTRUCT PAVEMENT PER SDD "LONGITUDINAL JOINTS AND PAVEMENT TIES DETAIL" AND SDD "DOWLED CONCRETE PAVEMENT DETAIL". SEE CROSS SECTIONS FOR PAVEMENT SLOPE.
2. RESTORE DISTURBED AREA WITH 4 INCHES OF TOPSOIL, SEED, AND EROSION MAT. SEE CROSS SECTIONS FOR TERRACE SLOPE.
3. SAWCUT ALONG EXISTING FLAG OF CURB AT PAVEMENT. SAWCUT THRU EXISTING STEEL REINFORCING TIE BARS. ANY DAMAGED CONCRETE PAVEMENT PANELS SHALL BE REPLACED. PLACE TIE BARS AT APPROXIMATELY 18" O.C. TO EXISTING BARS IN PAVEMENT TO MAXIMIZE SPACING. SEE TYPICAL SECTION FOR DETAIL.
4. SEE SHEET PS-01 & PS-02 FOR PROPOSED STORM SEWER DESIGN.

LEGEND

- XXXX — SAWING CONCRETE PAVEMENT, FULL DEPTH
- XCG — REMOVE CONCRETE CURB & GUTTER
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK & DRIVE
- 30A — TYPE "A" CONCRETE CURB & GUTTER
- 24H — TYPE "H" CONCRETE CURB & GUTTER
- SW5 — 5 INCH CONCRETE SIDEWALK
- PCC10 — 10 INCH CONCRETE PAVEMENT
- TOPSOIL, SEED, EROSION MAT
- — X — SILT FENCE
- INLET PROTECTION TYPE D



TYPICAL SECTION

AMERICAN PKWY BUS PULLOUT
STA 10+19.73 - STA 11+77.63
FINAL PAVEMENT LIMITS BY CONSTRUCTION ENGINEER

(NOT TO SCALE)

STORM SEWER SCHEDULE - STRUCTURES

STR NUMBER	STATION	LOCATION	TYPE	TOP OF CASTING ELEV	INVERT ELEV	STR DEPTH	NOTES
S-1	11+04.26	16.68' RT	H INLET	923.10	917.66	5.44	ADJUST EXISTING STRUCTURE TO AND SALVAGE EXISTING CASTING. INSTALL TYPE R-1878-B7G CASTING
S-2	11+03.28	26.88' RT	H INLET	923.34	917.40	5.94	INSTALL TYPE "H" INLET AND SALVAGED CASTING

STORM SEWER SCHEDULE - PIPE

PIPE NUMBER	FROM UPSTM STR	TO DWNSTM STR	LENGTH (FT)	SLOPE %	PIPE SIZE	TYPE	NOTES
P-1	S-1	S-2	10.25	2.53	12"	RCP	COLLAR PIPE AS NECESSARY

MARK	DATE	BY
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PLAN DETAILS - AMERICAN PKWY
THE AMERICAN CENTER OUTLOT 7
CITY OF MADISON

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EASTPARK BLVD

EXISTING PROPERTY LINE

PI STA 20+65.72

INSTALL PEDESTRIAN RAILING
END STA 20+56.09, 6.50' RT
SEE "RAILING STEEL DETAIL"

SLOPE INTERCEPT

ADJUST MANHOLE CASTING

REMOVE TREE

INSTALL PEDESTRIAN RAILING
BEGIN STA 20+22.90, 5.66' RT
SEE "RAILING STEEL DETAIL"

OUTLOT 7

BEGIN EASTPARK BLVD - PR FOW
STATION= 20+00.00
NORTHING= 508912.05
EASTING= 845887.23

PI STA 20+26.09

MATCH EXISTING PAVEMENT JOINTS

STA 30+34.76, 39.64' LT
911.56 BW/KEYSTONE

STA 30+53.27, 33.95' LT
911.77 MATCH EXISTING SIDEWALK

CURB RAMP DETECTABLE WARNING FIELDS

SEE NOTE 1

MATCH EXISTING PAVEMENT JOINTS

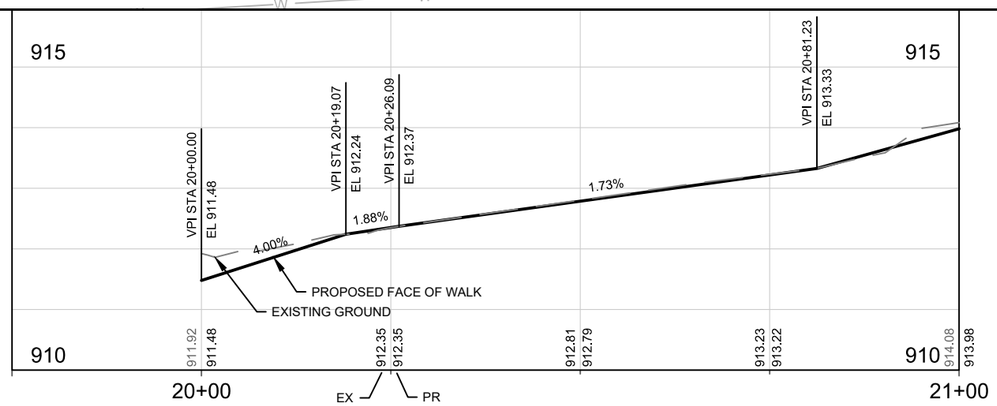
PC STA 31+36.89

CONNECT WATER SERVICE & PAVEMENT PATCHING BY PERMIT

BEGIN E TERRACE DR - PR RL
STATION= 30+00.00
NORTHING= 508882.67
EASTING= 845847.47

E TERRACE DR

END E TERRACE DR - PR RL
STATION= 32+23.20
NORTHING= 508807.66
EASTING= 846056.79



NOTES

1. SEE SDD "CURB RAMPS GENERAL AND CURB RAMP TYPE 2-A" FOR DETAILS.

LEGEND

- XXXX — SAWING CONCRETE PAVEMENT, FULL DEPTH
- XCG — REMOVE CONCRETE CURB & GUTTER
- REMOVE CONCRETE PAVEMENT
- REMOVE CONCRETE SIDEWALK & DRIVE
- 30A — TYPE "A" CONCRETE CURB & GUTTER
- 24H — TYPE "H" CONCRETE CURB & GUTTER
- SW5 — 5 INCH CONCRETE SIDEWALK
- PCC10 — 10 INCH CONCRETE PAVEMENT
- TOPSOIL, SEED, EROSION MAT
- X — SILT FENCE
- INLET PROTECTION TYPE D

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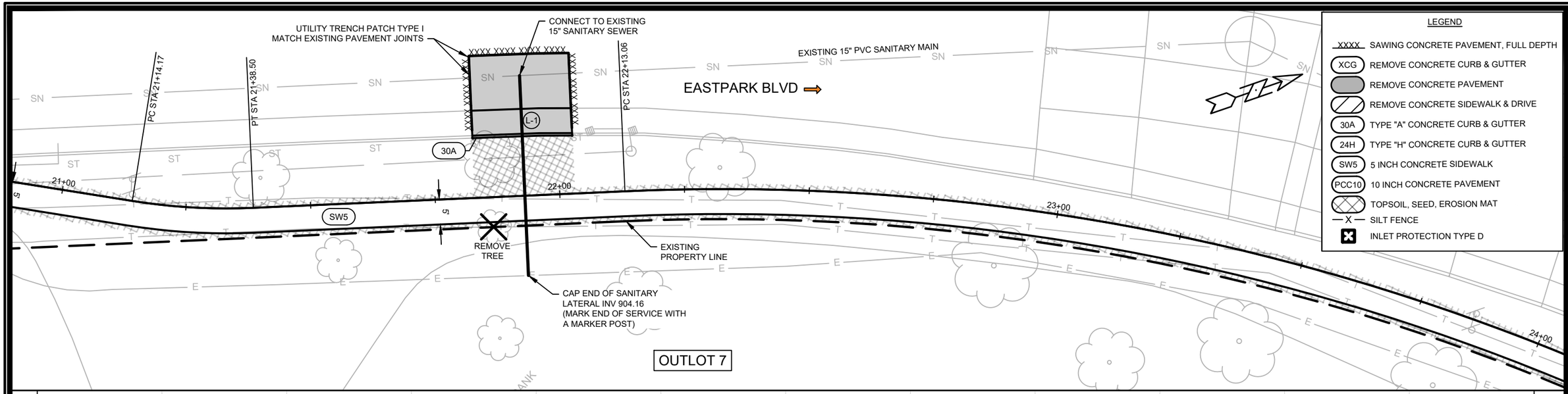

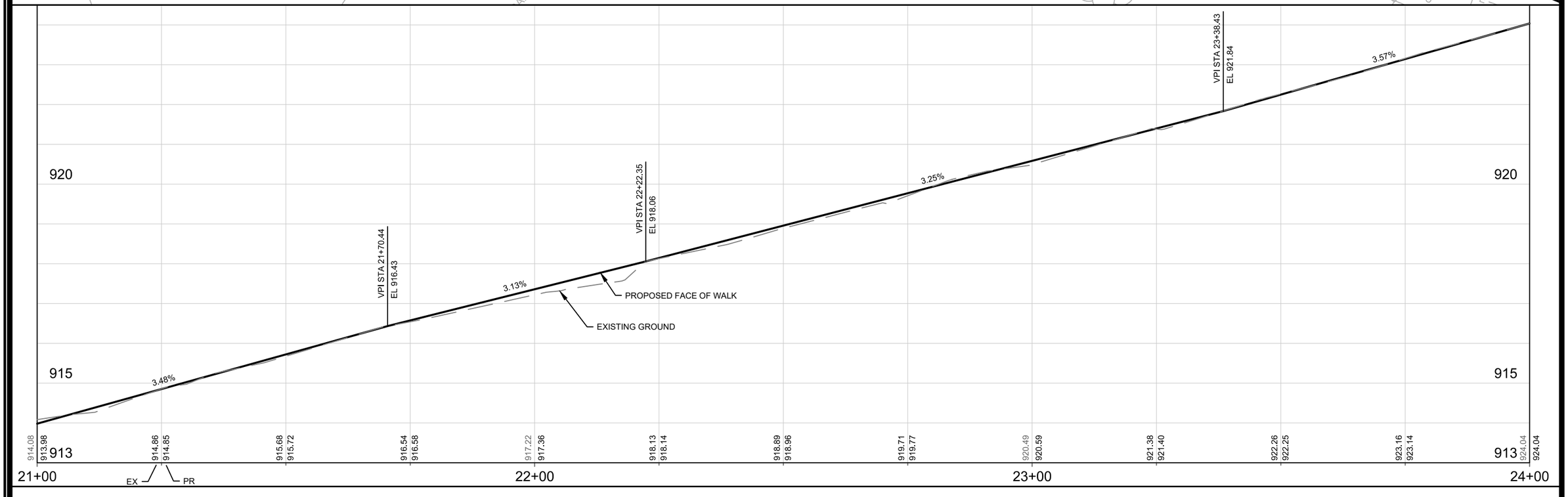

SANITARY SEWER SCHEDULE - PIPE LATERAL

LATERAL NUMBER	FROM UPSTM	TO DWNSTM	LENGTH (FT)	SLOPE %	PIPE SIZE	TYPE	NOTES
L-1	STA 21+93, 16.00' RT IE = 904.16	STA 21+93, 24.16' LT EXIST IE = 903.76	40.16	1.00	6"	PVC	CONNECT TO EXISTING 15" SANITARY SEWER MAIN IE = 903.76

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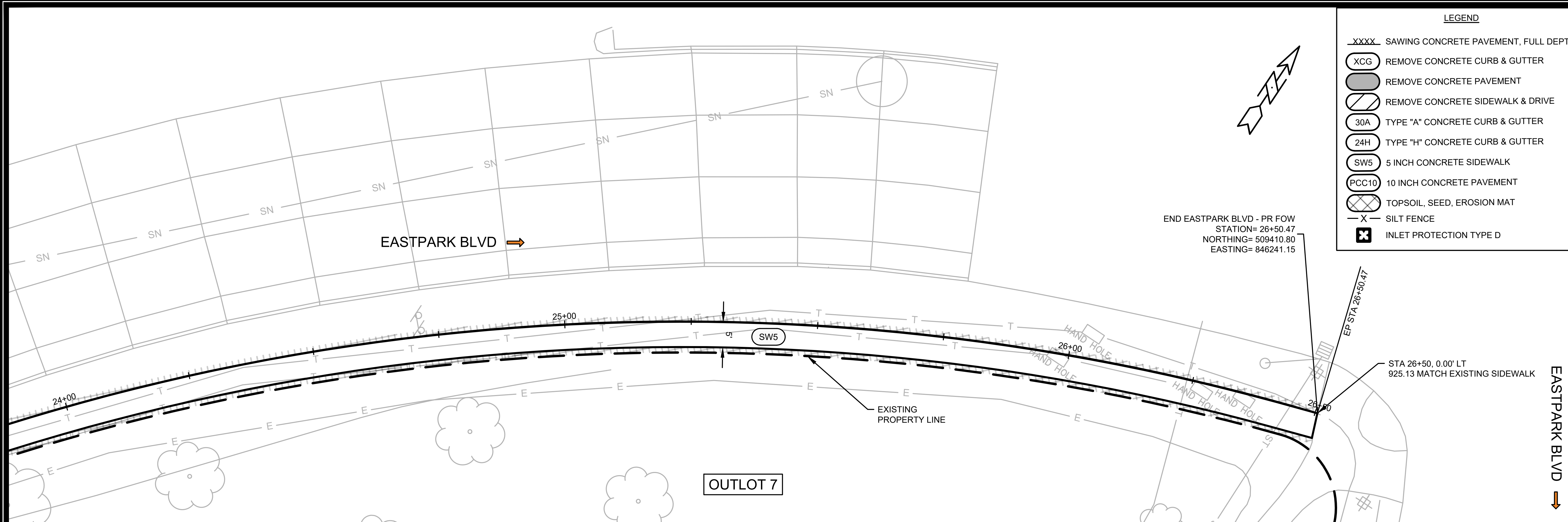

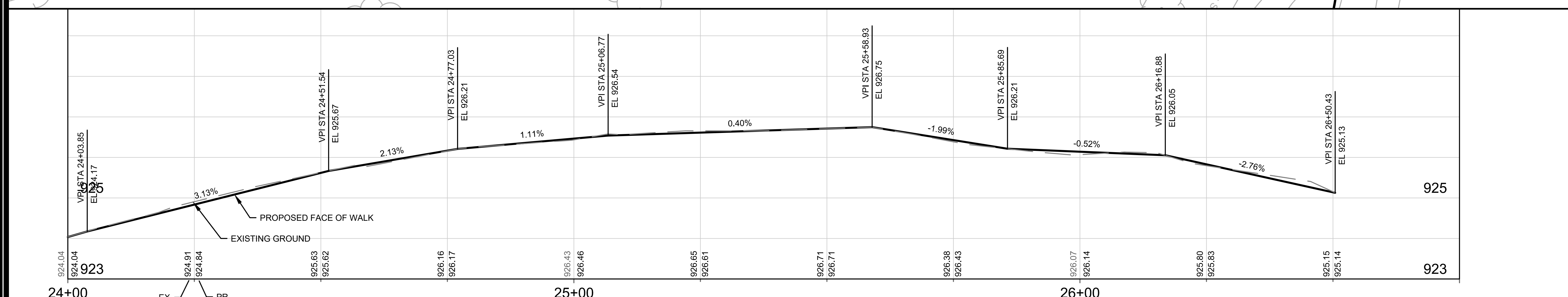

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12581

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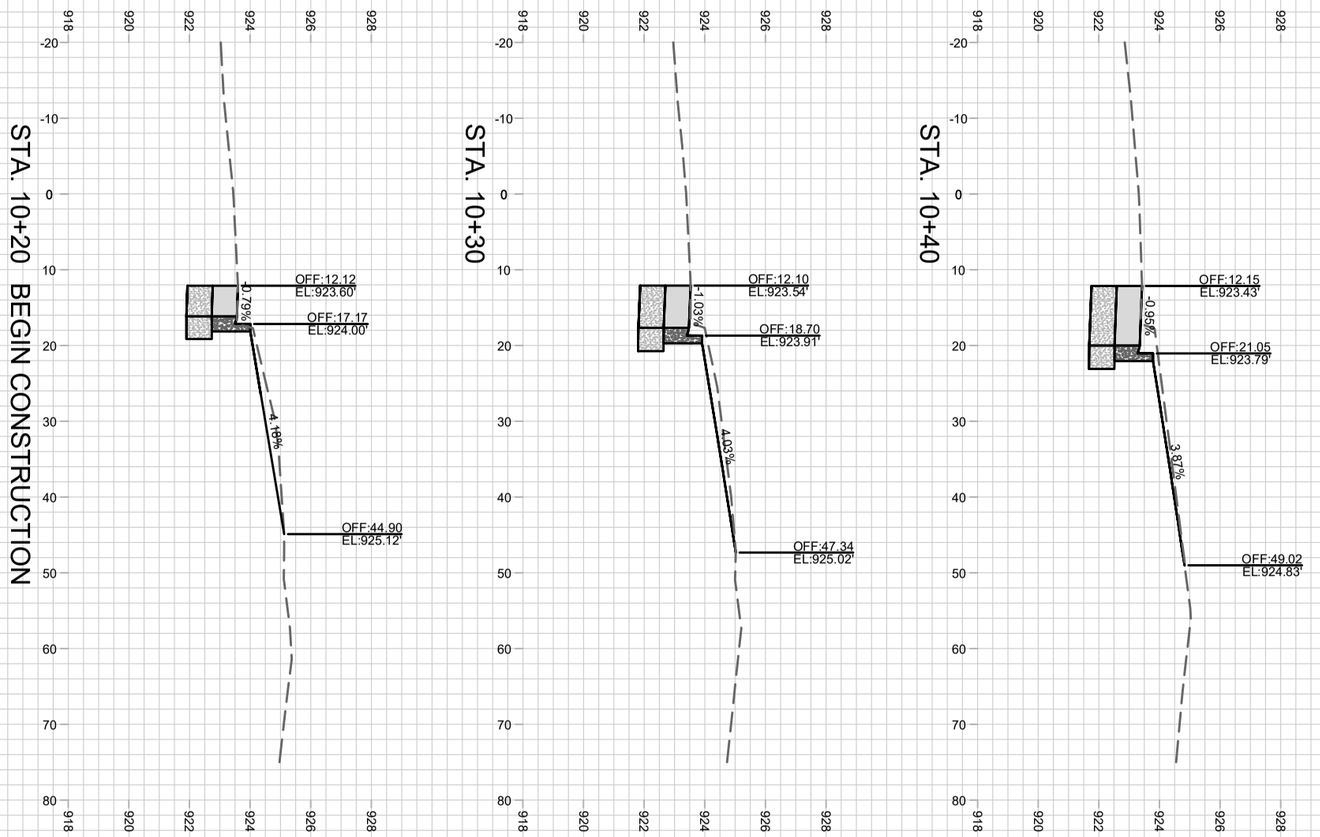

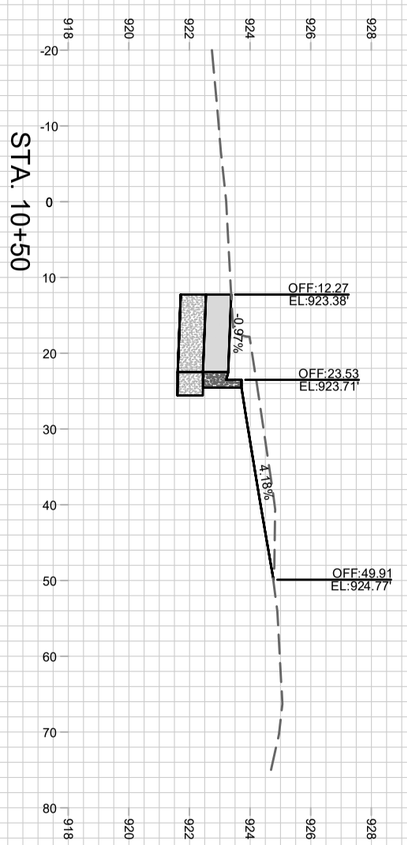

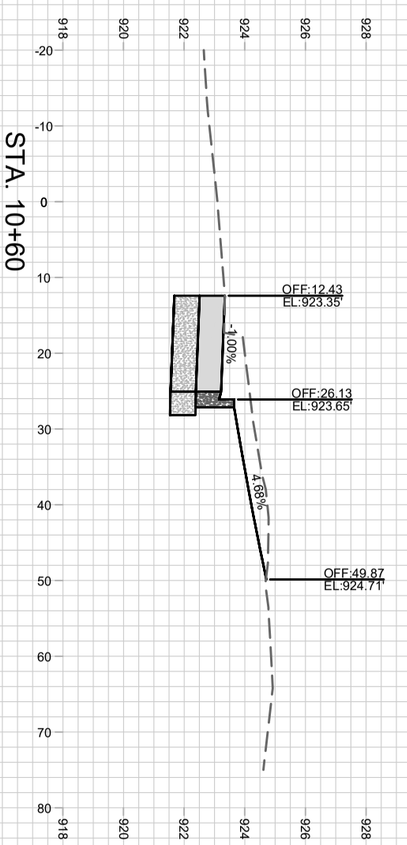

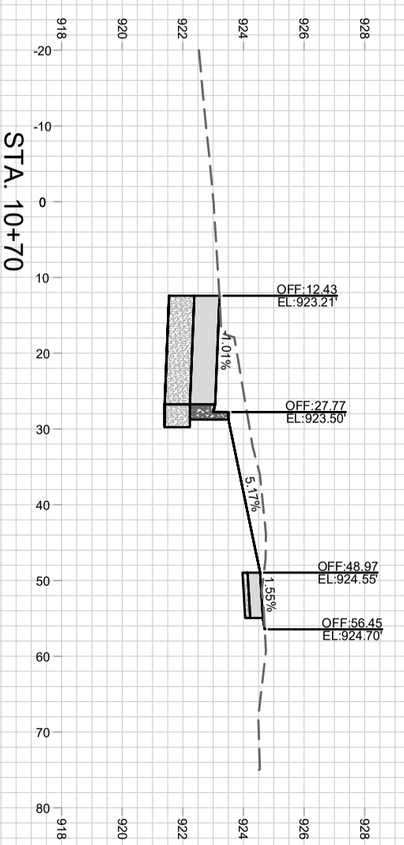

7	12581	CROSS SECTIONS - AMERICAN PKWY	12581
		THE AMERICAN CENTER OUTLOT 7	MADISON, MADISON, WI
		CITY OF MADISON	CONTRACT NO: 8362

MARK	REVISION	DATE	BY
Designed By: RES	Date: 10-11-2019	Scale: 1" = 20'	
12581			7

STA. 11+00

STA. 11+20

STA. 10+90

STA. 11+10

STA. 10+80

STA. 11+03

SEE SDD "H INLET LOCATIONS IN DIFFERENT CURB TYPES" FOR DETAILS

MARK	REVISION	DATE	BY
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Designed By: RES | Date: 10-11-2019 | Scale: 1" = 20'

12581

MADISON, MADISON, WI

CONTRACT NO: 8362

CROSS SECTIONS - AMERICAN PKWY

THE AMERICAN CENTER OUTLOT 7

CITY OF MADISON

12581

8

STA. 11+50

STA. 11+78 END CONSTRUCTION

STA. 11+40

STA. 11+70

STA. 11+30

STA. 11+60

MARK	REVISION	DATE	BY
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Designed By: RES | Date: 10-11-2019 | Scale: 1" = 20'

12581

MADISON, MADISON, WI 8362

CONTRACT NO:

CROSS SECTIONS - AMERICAN PKWY

THE AMERICAN CENTER OUTLOT 7

CITY OF MADISON

12581

9

STA. 20+41

STA. 20+34

STA. 20+28

STA. 20+55

STA. 20+48

MARK	REVISION	DATE	BY
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Designed By: RES
Date: 10-11-2019
Scale: 1" = 20'
12581
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12581

MADISON, MADISON, WI

CONTRACT NO: 8362

CROSS SECTIONS - EASTPARK BLVD

THE AMERICAN CENTER OUTLOT 7

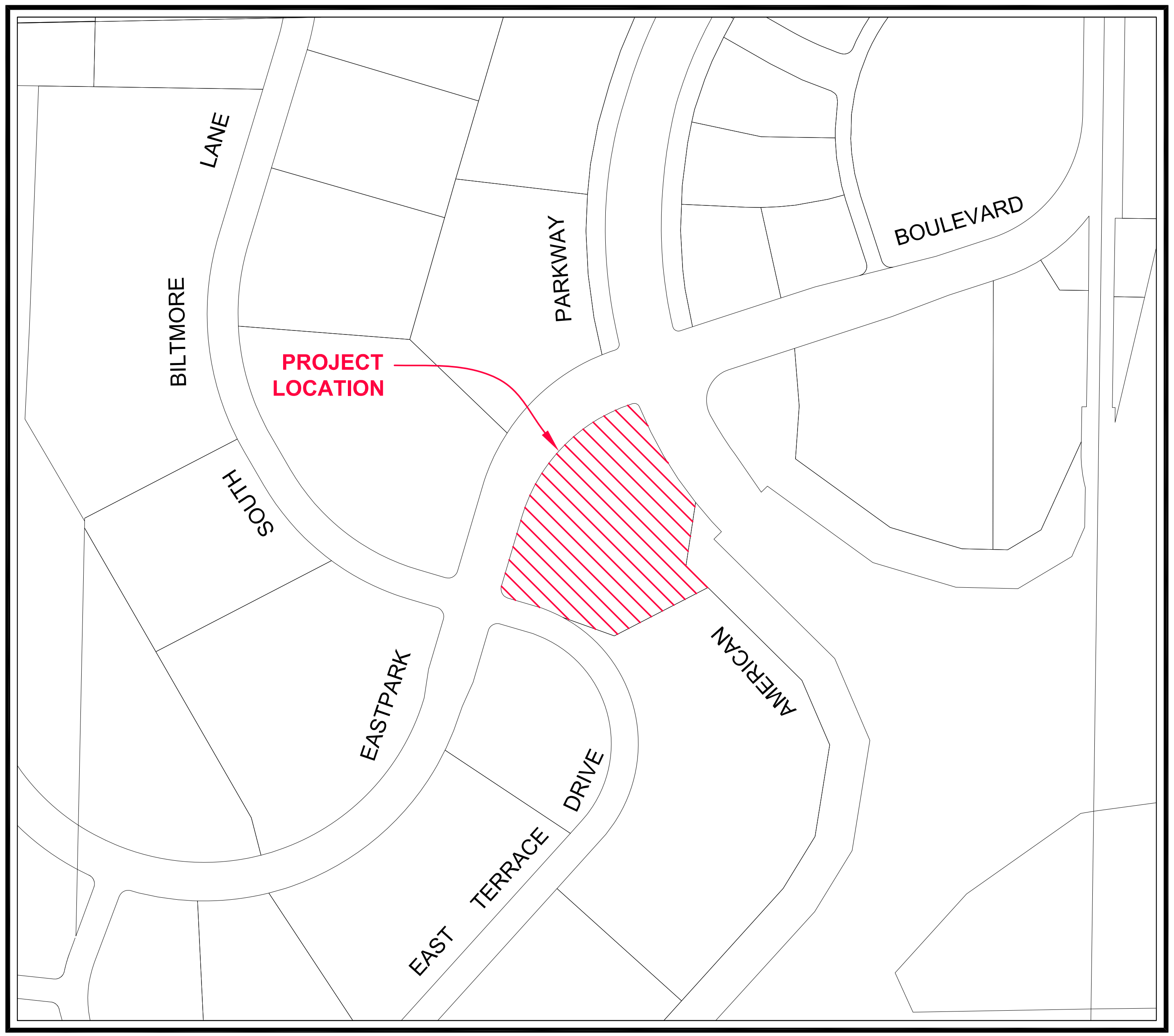
CITY OF MADISON

12581

10

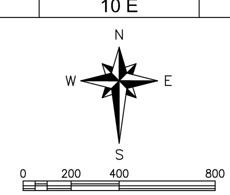
THE AMERICAN CENTER
OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS

CITY OF MADISON
DANE COUNTY, WISCONSIN



LOCATION MAP

TOWN	RANGE	SECTION (s)
8 N	10 E	22 NE



LEGEND - CIVIL ENGINEERING DRAWINGS

- GENERIC MANHOLE
- GENERIC VENT
- SEWER MANHOLE
- CLEAN OUT
- SEPTIC SYSTEM
- SEPTIC TANK COVER
- SEPTIC VENT
- MONITORING WELL
- WATER VALVE
- HYDRANT
- YARD HYDRANT
- WATER VALVE MANHOLE
- WATER CURB STOP
- WELL
- SPRINKLER HEAD
- **STORM CATCH BASIN**
- **STORM INLET**
- GAS MANHOLE
- GAS VALVE
- GAS METER
- GAS VENT
- GAS VALVE TEST
- GAS CURB STOP
- ELECTRIC BOX
- ELECTRIC MANHOLE
- ELECTRIC METER

- TELEPHONE BOX
- TELEPHONE MANHOLE
- CABLE BOX
- UTILITY POLE
- GUY WIRE
- LIGHT POLE
- YARD LIGHT
- TRAFFIC SIGNAL
- PULL BOX
- SANITARY SEWER
- WATER MAIN
- **STORM SEWER**
- UNDERGROUND GAS MAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND TV CABLE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL SHOULDER
- EDGE OF CONCRETE
- **DITCH**
- **TOE OF SLOPE**
- **TOP OF BANK**
- FENCE
- GUARD RAIL
- **CULVERT (SIZE & TYPE NOTED)**
- RAILROAD TRACKS
- EDGE OF TREES & BRUSH

- FLAG POLE
- MAIL BOX
- POST
- DELINEATOR POST
- MARKER POST
- SIGN
- PILING
- AIR CONDITIONER
- RAILROAD SIGNAL FLASHER
- RAILROAD SIGNAL BOX
- RAILROAD SPIKE
- STUMP
- DECIDUOUS TREE
- DECIDUOUS MULTIPLE TRUNK TREE
- CONIFEROUS MULTIPLE TRUNK TREE
- CONIFEROUS TREE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- SECTION CORNER
- MONUMENT
- TEST BORING
- PK NAIL
- DECORATIVE ROCK
- REVISION LABEL
- WETLANDS
- WATER ELEVATION

- PROPOSED SILT FENCE
- PROPOSED SANITARY SEWER (PLAN VIEW)
- **PROPOSED STORM SEWER (PLAN VIEW)**
- PROPOSED WATER MAIN
- PROPOSED SLOPE INTERCEPT
- PROPOSED DETECTABLE WARNING FIELD
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY RISER
- PROPOSED WATER VALVE
- PROPOSED HYDRANT
- PROPOSED YARD HYDRANT
- PROPOSED WATER VALVE MANHOLE
- PROPOSED WATER MAIN REDUCER
- PROPOSED WATER MAIN OFFSET
- PROPOSED WATER MAIN PLUG
- PROPOSED WATER MAIN PLUG W/AIR RELEASE
- PROPOSED WATER MAIN CROSS
- PROPOSED WATER MAIN TEE
- PROPOSED WATER MAIN BEND (ANGLE NOTED)
- PROPOSED LOCATOR BOX
- **PROPOSED STORM INLET/CATCH BASIN**
- **PROPOSED STORM MANHOLE**
- PROPOSED DITCH CHECK
- PROPOSED INLET PROTECTION

CHECKED BY: ____________

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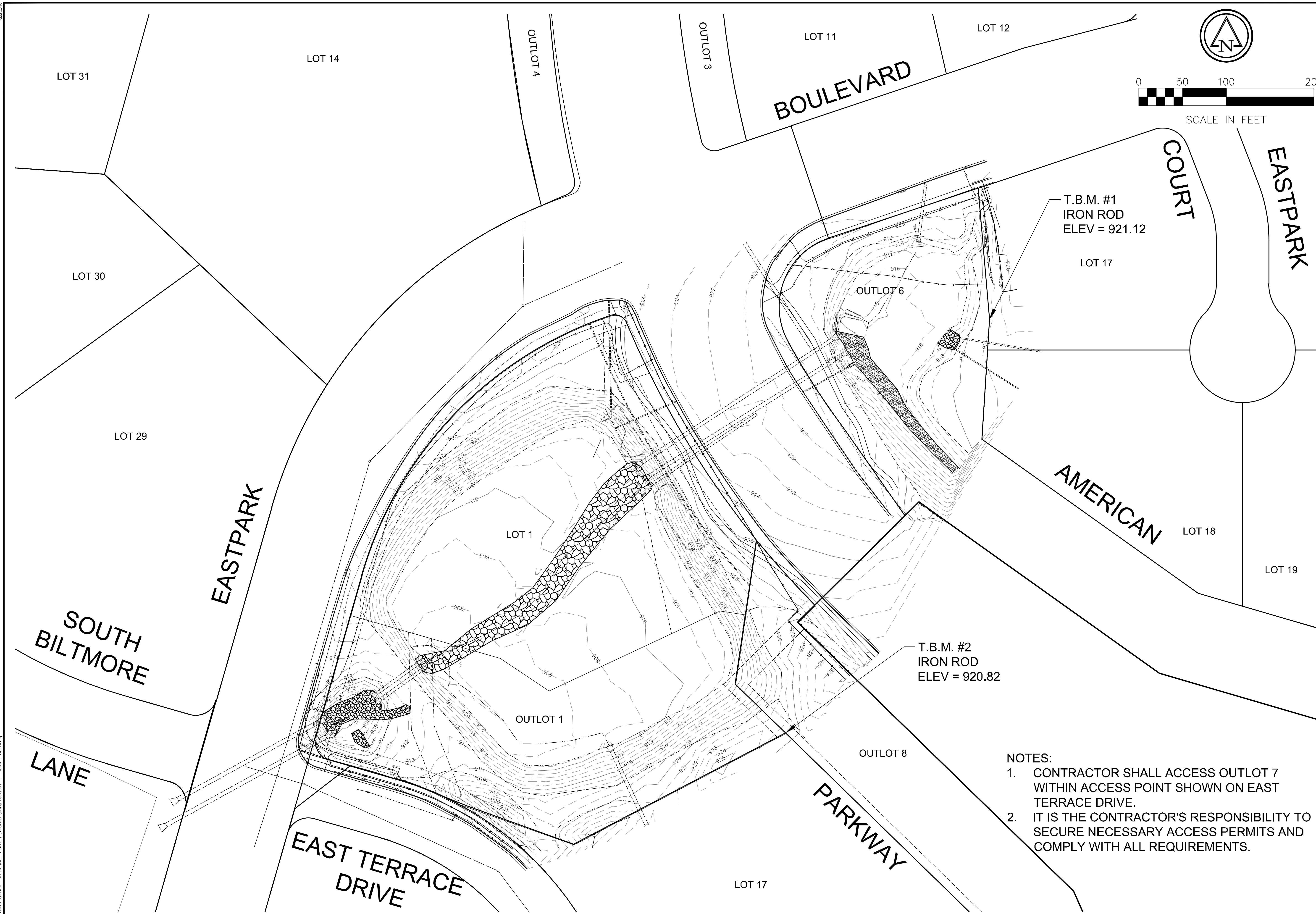
BID SET

SHEET L1
PROJECT NO. 8190–10020



NOTES:

1. CONTRACTOR SHALL ACCESS OUTLOT 7 WITHIN ACCESS POINT SHOWN ON EAST TERRACE DRIVE.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE NECESSARY ACCESS PERMITS AND COMPLY WITH ALL REQUIREMENTS.

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

REVISIONS 1 2 3 4 5 6 7

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
EXISTING CONDITIONS

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019

FILE NO. **8190-10020**

BID SET

SHEET NO. **GN-01**

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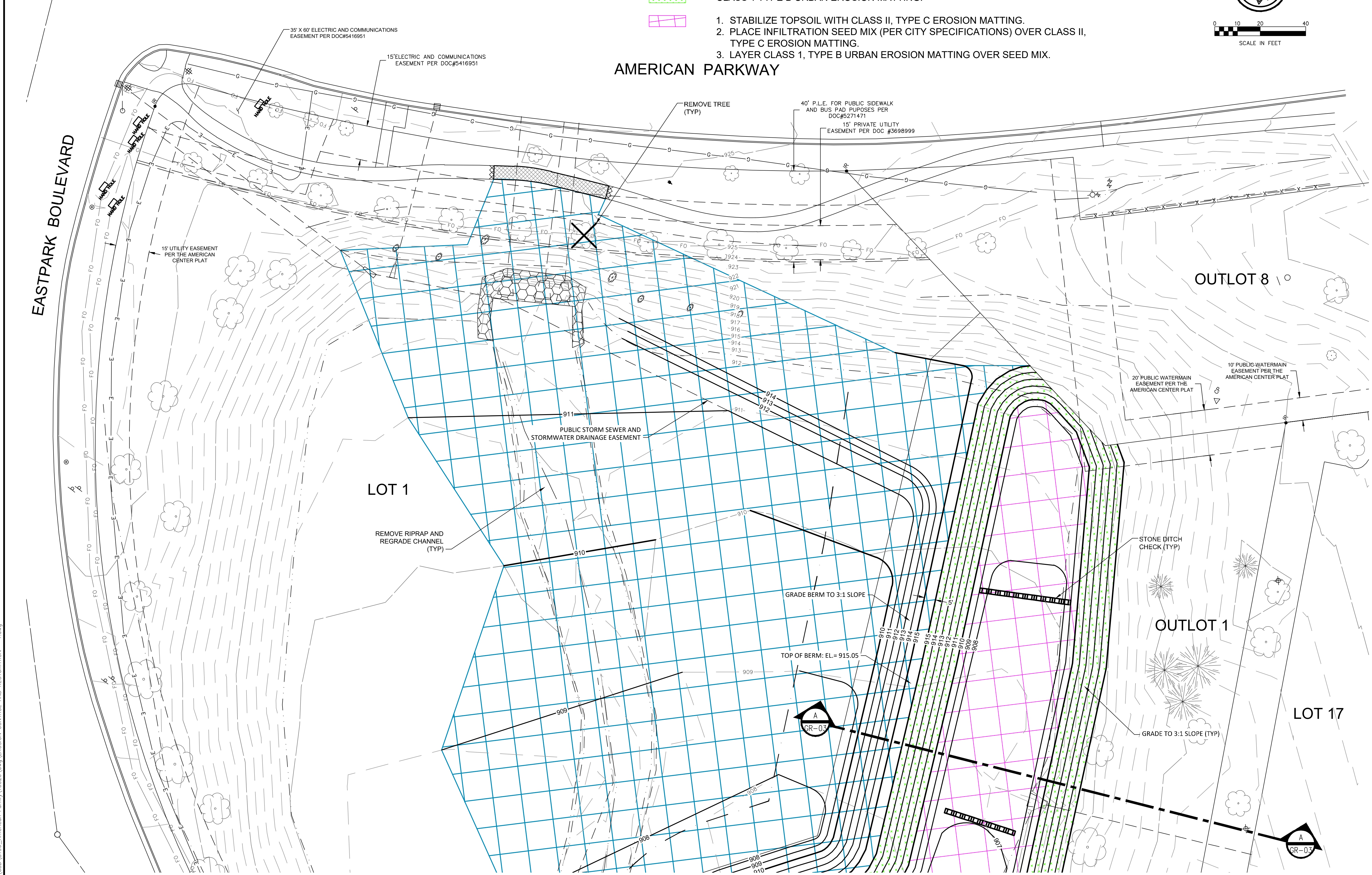
G:\C3D\8190_American Family\10020\dwg\Outlot 7 Area Plan.dwg

RESTORATION NOTE:
PROVIDE EROSION MATTING AND PERMANENT SEEDING IMMEDIATELY FOLLOWING GRADING ACTIVITY.

LEGEND:

- CLASS 1 TYPE A EROSION MATTING.
- CLASS 1 TYPE B URBAN EROSION MATTING.
- 1. STABILIZE TOPSOIL WITH CLASS II, TYPE C EROSION MATTING.
  2. PLACE INFILTRATION SEED MIX (PER CITY SPECIFICATIONS) OVER CLASS II, TYPE C EROSION MATTING.
  3. LAYER CLASS 1, TYPE B URBAN EROSION MATTING OVER SEED MIX.



THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
PROPOSED EROSION CONTROL & GRADING PLAN

CITY OF MADISON
DANE COUNTY, WISCONSIN

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REVISIONS: 7 6 5 4 3 2 1

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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DESIGNED BY: BJS
DRAFTED BY: JTK
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DATE: OCTOBER 4, 2019

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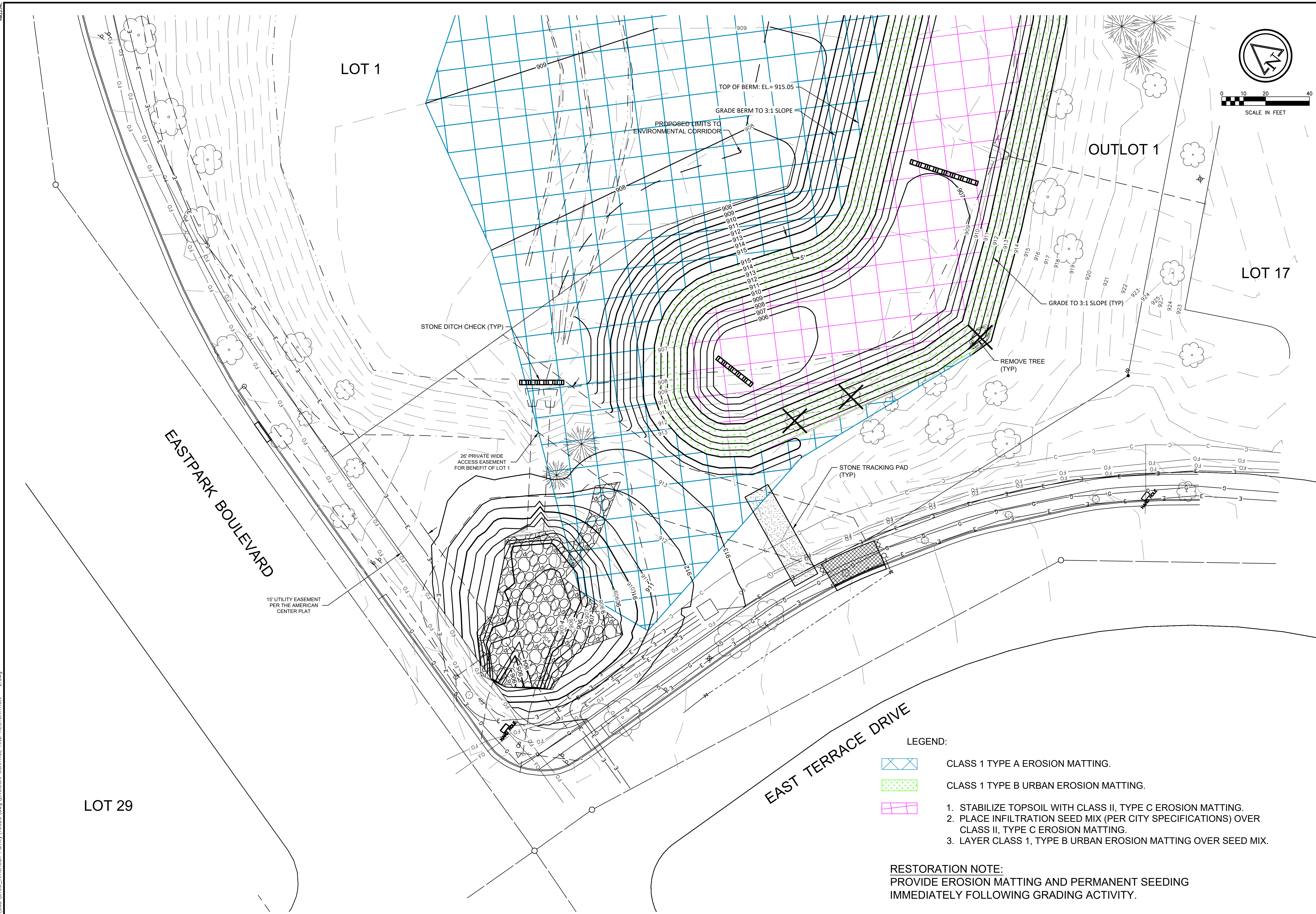

LEGEND:

CLASS 1 TYPE A EROSION MATTING.

CLASS 1 TYPE B URBAN EROSION MATTING.

1. STABILIZE TOPSOIL WITH CLASS II, TYPE C EROSION MATTING.
2. PLACE INFILTRATION SEED MIX (PER CITY SPECIFICATIONS) OVER CLASS II, TYPE C EROSION MATTING.
3. LAYER CLASS 1, TYPE B URBAN EROSION MATTING OVER SEED MIX.

RESTORATION NOTE:
PROVIDE EROSION MATTING AND PERMANENT SEEDING IMMEDIATELY FOLLOWING GRADING ACTIVITY.

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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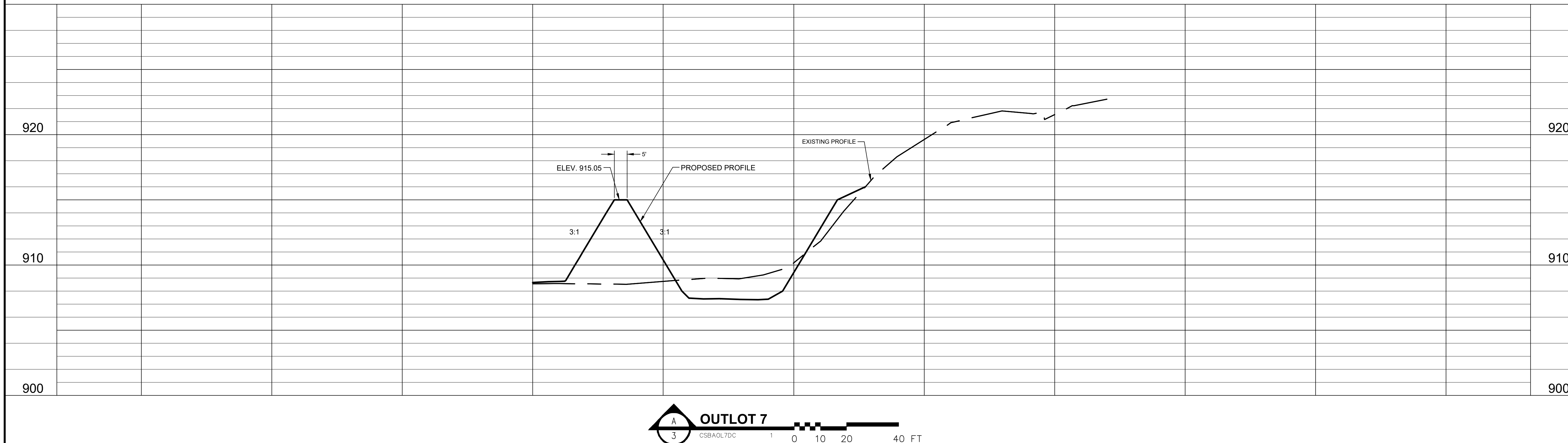
THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
PROPOSED EROSION CONTROL & GRADING PLAN

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019
FILE NO. 8190-10020

BID SET

SHEET NO. GR-02



BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

REVISIONS 7 6 5 4 3 2 1

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
PROPOSED OUTLOT 7 CROSS SECTION

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019
FILE NO. **8190-10020**

BID SET
SHEET NO. **GR-03**

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Oct 18, 2019 11:33am PLOTTED BY:GDeprey SAVED BY:JKLIEVE
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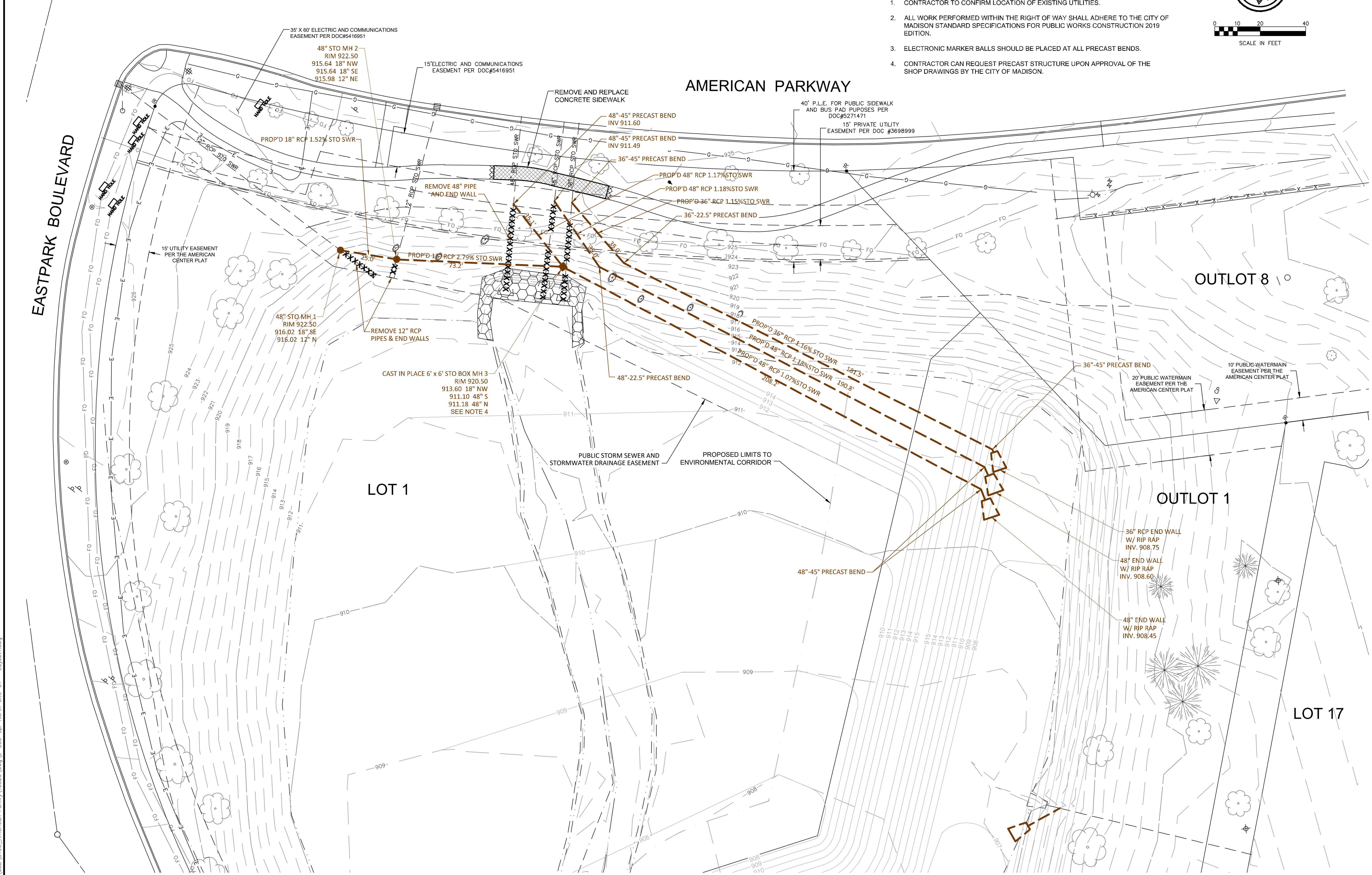
XREFS:rm2234c; RMLOGO-BRANCH OFFICES; Csbaol7dc
G:\C3D\8190_American Family\10020\dwg\CROSS SECTION OUTLOT 7.dwg

NOTES:

1. CONTRACTOR TO CONFIRM LOCATION OF EXISTING UTILITIES.
2. ALL WORK PERFORMED WITHIN THE RIGHT OF WAY SHALL ADHERE TO THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2019 EDITION.
3. ELECTRONIC MARKER BALLS SHOULD BE PLACED AT ALL PRECAST BENDS.
4. CONTRACTOR CAN REQUEST PRECAST STRUCTURE UPON APPROVAL OF THE SHOP DRAWINGS BY THE CITY OF MADISON.



0 10 20 40
SCALE IN FEET
AMERICAN PARKWAY
EASTPARK BOULEVARD
35' X 60' ELECTRIC AND COMMUNICATIONS EASEMENT PER DOC#5416951
48" STO MH 2
RIM 922.50
915.64 18" NW
915.64 18" SE
915.98 12" NE
15' ELECTRIC AND COMMUNICATIONS EASEMENT PER DOC#5416951
REMOVE AND REPLACE CONCRETE SIDEWALK
48"-45° PRECAST BEND
INV 911.60
48"-45° PRECAST BEND
INV 911.49
36"-45° PRECAST BEND
PROP'D 48" RCP 1.17% STO SWR
PROP'D 48" RCP 1.18% STO SWR
PROP'D 36" RCP 1.15% STO SWR
36"-22.5° PRECAST BEND
40' P.L.E. FOR PUBLIC SIDEWALK AND BUS PAD PUPOSES PER DOC#5271471
15' PRIVATE UTILITY EASEMENT PER DOC #3698999
PROP'D 18" RCP 1.52% STO SWR
REMOVE 48" PIPE AND END WALL
15' UTILITY EASEMENT PER THE AMERICAN CENTER PLAT
PROP'D 18" RCP 2.79% STO SWR
73.2'
25.0'
48" STO MH 1
RIM 922.50
916.02 18" SE
916.02 12" N
REMOVE 12" RCP PIPES & END WALLS
CAST IN PLACE 6' x 6' STO BOX MH 3
RIM 920.50
913.60 18" NW
911.10 48" S
911.18 48" N
SEE NOTE 4
48"-22.5° PRECAST BEND
PROP'D 36" RCP 1.16% STO SWR 181.5'
PROP'D 48" RCP 1.18% STO SWR 190.8'
PROP'D 48" RCP 1.07% STO SWR 208.2'
36"-45° PRECAST BEND
20' PUBLIC WATERMAIN EASEMENT PER THE AMERICAN CENTER PLAT
10' PUBLIC WATERMAIN EASEMENT PER THE AMERICAN CENTER PLAT
OUTLOT 8
OUTLOT 1
LOT 1
LOT 17
PUBLIC STORM SEWER AND STORMWATER DRAINAGE EASEMENT
PROPOSED LIMITS TO ENVIRONMENTAL CORRIDOR
36" RCP END WALL
W/ RIP RAP
INV. 908.75
48" END WALL
W/ RIP RAP
INV. 908.60
48" END WALL
W/ RIP RAP
INV. 908.45
48"-45° PRECAST BEND

BID SET

REVISIONS 1 2 3 4 5 6 7

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
PROPOSED PAVEMENT & STORM PLAN

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019

FILE NO.
8190-10020

BID SET

SHEET NO.
PS-01

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Oct 18, 2019 11:33am PLOTTED BY: GDeprey SAVED BY: GDeprey
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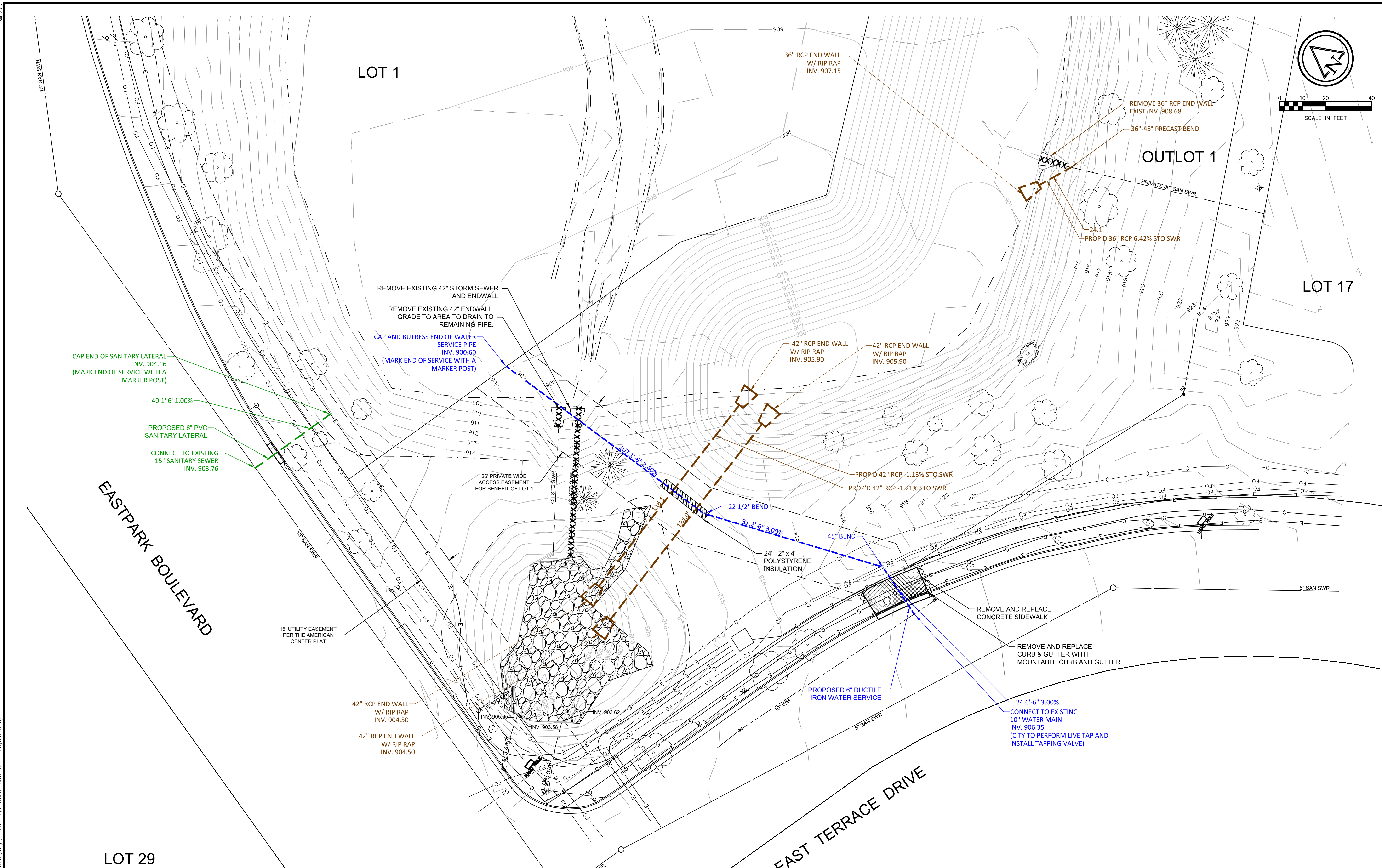
LOT 1
OUTLOT 1
LOT 17
LOT 29
EASTPARK BOULEVARD
EAST TERRACE DRIVE
SCALE IN FEET
0 10 20 40
36" RCP END WALL W/ RIP RAP INV. 907.15
REMOVE 36" RCP END WALL EXIST INV. 908.68
36"-45° PRECAST BEND
PRIVATE 36" SAN SWR
24.1'
PROP'D 36" RCP 6.42% STO SWR
REMOVE EXISTING 42" STORM SEWER AND ENDWALL
REMOVE EXISTING 42" ENDWALL. GRADE TO AREA TO DRAIN TO REMAINING PIPE.
CAP AND BUTRESS END OF WATER SERVICE PIPE INV. 900.60 (MARK END OF SERVICE WITH A MARKER POST)
CAP END OF SANITARY LATERAL INV. 904.16 (MARK END OF SERVICE WITH A MARKER POST)
40.1' 6' 1.00%
PROPOSED 6" PVC SANITARY LATERAL
CONNECT TO EXISTING 15" SANITARY SEWER INV. 903.76
42" RCP END WALL W/ RIP RAP INV. 905.90
42" RCP END WALL W/ RIP RAP INV. 905.90
PROP'D 42" RCP -1.13% STO SWR
PROP'D 42" RCP -1.21% STO SWR
107.1'-6" 2.40%
22 1/2° BEND
81.2'-6" 3.00%
45° BEND
24' - 2" x 4' POLYSTYRENE INSULATION
26' PRIVATE WIDE ACCESS EASEMENT FOR BENEFIT OF LOT 1
42" STO SWR
15' SAN SWR
15' UTILITY EASEMENT PER THE AMERICAN CENTER PLAT
REMOVE AND REPLACE CONCRETE SIDEWALK
REMOVE AND REPLACE CURB & GUTTER WITH MOUNTABLE CURB AND GUTTER
8" SAN SWR
PROPOSED 6" DUCTILE IRON WATER SERVICE
24.6'-6" 3.00%
CONNECT TO EXISTING 10" WATER MAIN INV. 906.35 (CITY TO PERFORM LIVE TAP AND INSTALL TAPPING VALVE)
10" WM
42" RCP END WALL W/ RIP RAP INV. 904.50
42" RCP END WALL W/ RIP RAP INV. 904.50
INV. 905.65
INV. 903.58
INV. 903.62

NOTES:

1. CONTRACTOR TO CONFIRM LOCATION OF EXISTING UTILITIES.
2. ALL WORK PERFORMED WITHIN THE RIGHT OF WAY SHALL ADHERE TO THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2019 EDITION.
3. ELECTRONIC MARKER BALLS SHOULD BE PLACED AT ALL PRECAST BENDS.

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
PROPOSED PAVEMENT & STORM PLAN

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019
FILE NO. 8190-10020
BID SET
SHEET NO. PS-02

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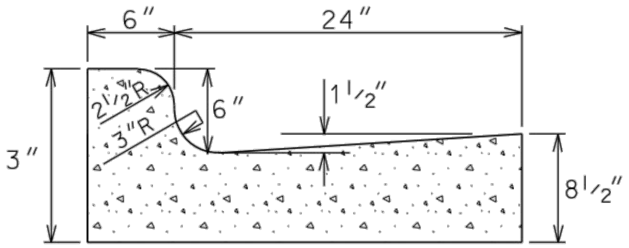
GENERAL NOTES

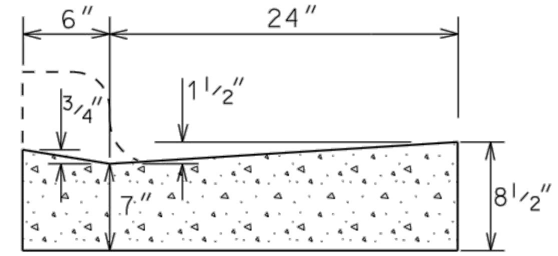
1. INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO ANY LAND DISTURBING ACTIVITIES. AS SHOWN ON DRAWINGS OR DIRECTED BY ENGINEER. INSTALL EROSION AND SEDIMENT MEASURES AT ALL EXISTING AND PROPOSED IMPACTED STORM FACILITES.
2. REMOVE CURB, SIDEWALK AND INSTALL STONE TRACKING PAD.
3. PERFORM TREE REMOVAL AND CLEARING AS REQUIRING FOR GRADING.
4. STRIP AND STOCKPILE TOPSOIL. PROVIDE SILT FENCE PERIMETER FOR STOCKPILES.
5. GRADE PROPOSED BERM AND CHANNEL INSTALL STORM SEWER WITHOUT DISRUPTING EXISTING DRAINAGE SYSTEM.
6. IMMEDIATELY PROVIDE EROSION MATTING AND PERMANENT SEEDING TO BERM AND CHANNEL.
7. DISTURBED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OF INACTIVITY.
8. ONCE THE CHANNEL HAS STABILIZED, CONNECT TO THE EXISTING DRAINAGE STORM SEWER. REMOVE EXISTING STORM SEWER AS SHOWN ON DRAWINGS.
9. REGRADE EXISTING CHANNEL AND REMOVE ANY REMAINING STORM SEWER OR STRUCTURES.
10. COMPLETE FINAL RESTORATION INCLUDING BUT NOT LIMITED TO : SEEDING, TOPSOIL, PLANTINGS, AND EROSION MATTING.
11. REPLACE SIDEWALK AND CURB AT CONSTRUCTION ENTRANCE.
12. REMOVE EROSION AND SEDIMENT CONTROL DEVICES AFTER 80% OF VEGETATION HAS BEEN ESTABLISHED IN A ALL RESTORED AREAS. RESTORE DISTURBED AREAS AROUND REMOVED DEVICES, CLEAN OUT STORM WATER STRUCTURES AND CLEAN SITE.

EROSION CONTROL NOTES:

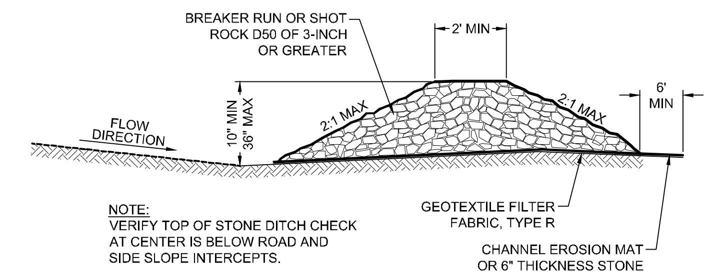
1. INSPECTION OF ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DONE BY CONTRACTOR ONCE PER WEEK AND AFTER EVERY PRECIPITATION EVENT OF ½-INCH OR GREATER.
2. CONTRACTOR SHALL REPAIR DEFICIENT EROSION AND SEDIMENT CONTROL MEASURES WITHIN 24-HOURS AFTER INSPECTION. ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES NOT SHOWN ON THIS PLAN MAY BE NECESSARY AS A RESULT OF CONSTRUCTION PRACTICES OR AS DIRECTED BY CITY AND/OR ENGINEER.
3. CONTRACTOR SHALL NOTIFY AND OBTAIN WRITTEN ACCEPTANCE FROM ENGINEER OF PROPOSED CHANGES TO THE EROSION CONTROL PLAN AND/OR SEQUENCE PRIOR TO IMPLEMENTING THE CHANGE.
4. ENGINEER IS UNDER NO OBLIGATION TO ALTER THE CONSTRUCTION SEQUENCE AND/OR EROSION CONTROL PLAN.
5. EXCESS MATERIAL THAT IS HAULED OFF SITE SHALL BE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL OBTAIN PROPER PERMIT APPROVALS FOR EACH FILL SITE. EROSION AND SEDIMENT CONTROL MEASURES, RESTORATION AND STABILIZATION AT FILL SITE IS CONTRACTOR'S RESPONSIBILITY. CONTRACTOR TO NOTIFY OWNER OF ALL FILL AND BORROW SITES.
6. CONTRACTOR SHALL SWEEP STREETS ADJACENT TO PROJECT AT THE END OF EACH DAY.
7. ALL INSTALLATION, MAINTENANCE AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE WISCONSIN DNR TECHNICAL STANDARDS AND THE SLOPE PROTECTION AND EROSION CONTROL SPECIFICATION SECTION 01 57 13.
8. IF DEWATERING IN NECESSARY, CONTRACTOR SHALL PROVIDE PROPER DEWATERING SEDIMENT CONTROL DEVICE. DISCHARGE OF SEDIMENT LADEN WATER TO THE STORM SEWER OR SURFACE WATER IS PROHIBITED.



TYPE 'A' CONCRETE CURB & GUTTER



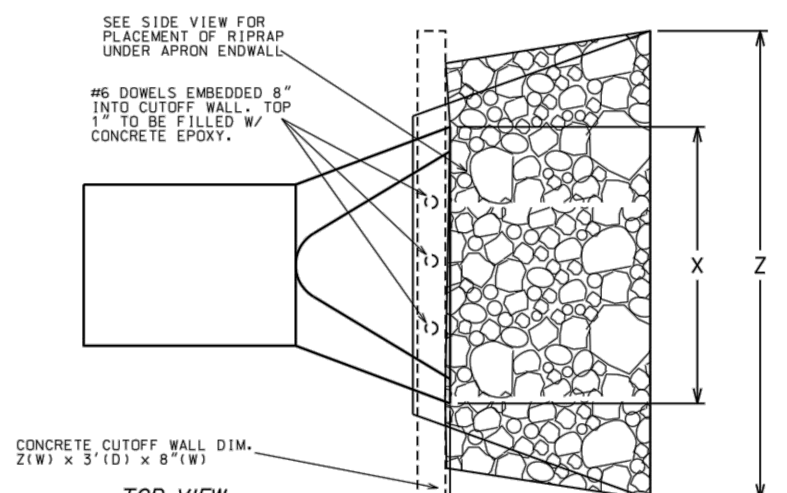
DRIVEWAY SECTION TYPE 'A' CONCRETE CURB & GUTTER
(PAY AS TYPE 'A' CURB AND GUTTER)



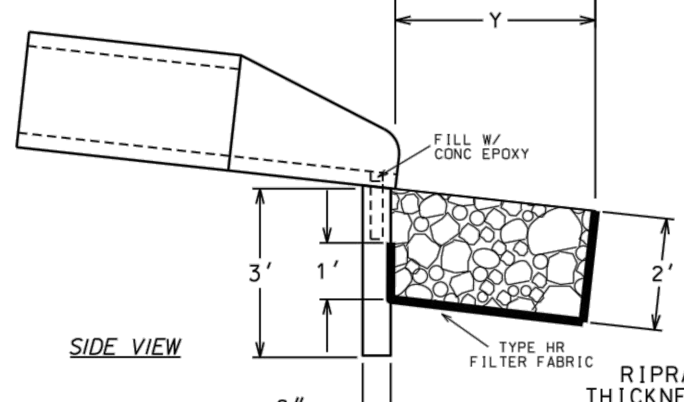
NOTE:
VERIFY TOP OF STONE DITCH CHECK AT CENTER IS BELOW ROAD AND SIDE SLOPE INTERCEPTS.

STONE DITCH CHECK NO SCALE

EC-DITCH-03 32



TOP VIEW



SIDE VIEW

NOT TO SCALE

RIPRAP PLACEMENT & THICKNESS IN ACCORDANCE WITH ARTICLE 212.3

DIA (in)	X (in)	Y (in)	Z (in)	APPROX. WEIGHT (tons)
12	24	48	48	1.78
15	30	60	60	2.64
18	36	60	60	2.78
21	42	72	72	3.83
24	48	72	72	4.00
27	54	72	81	4.42
30	60	84	90	5.64
36	72	96	108	7.56
42	78	96	120	8.22
48	84	108	120	9.50
54	90	108	150	11.00
60	96	108	162	11.75
66	102	132	174	15.28
72	108	132	186	16.19

NOTES:

1) CITY OF MADISON STANDARD SPECIFICATIONS SHALL APPLY TO ALL INSTALLATIONS.
2) PIPES SHALL HAVE JOINT TIES PER STANDARD DETAIL DRAWING 5.4.6 & SECTION 504.2 (L).
3) WHERE RIPRAP IS CALLED FOR, PIPES 36" OR GREATER SHALL HAVE 50% OF THE RIPRAP PAD PLACED WITH A SLURRY GROUT MIX ON AN UNEVEN RIPRAP SURFACE. SLURRY GROUT SHALL BE TYPE B SLURRY PER SECTION 300 OF THE STANDARD SPECIFICATIONS.
4) TWIN APRON INSTALLATIONS SHALL BE GOVERNED BY THE OUTSIDE DIMENSIONS OF A SINGLE PIPE.
5) CONCRETE CUTOFF FOR RCP REQUIRED ONLY WHEN CALLED FOR ON PLANS. WHERE CONCRETE CUTOFF WALL IS CALLED FOR IT SHALL BE INCLUDED IN THE ENDWALL COST.

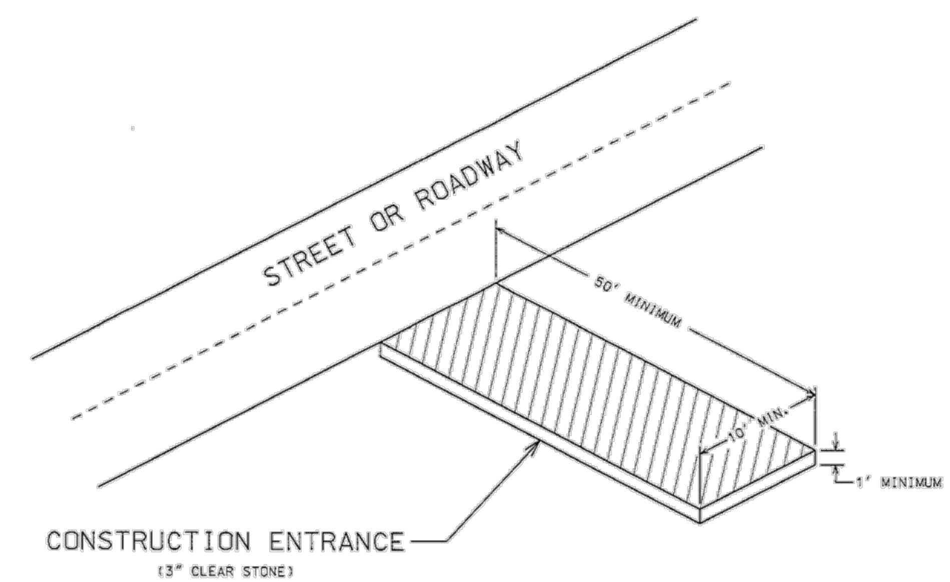
2018

CITY OF MADISON
ENGINEERING DIVISION

RIPRAP AT APRON END WALLS

STANDARD DETAIL DRAWING 5.4.4

1.07



CONSTRUCTION ENTRANCE
(3" CLEAR STONE)

GENERAL NOTES:

1. CONSTRUCTION ENTRANCE TO BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE SITE.
2. THE AGGREATE FOR THE CONSTRUCTION ENTRANCE SHALL BE 3 INCH CLEAR OR WASHED STONE.
3. AGGREGATE SHALL BE PLACED IN A LAYER AT LEAST 12 INCHES THICK.
4. THE CONSTRUCTION ENTRANCE SHALL BE UNDERLAIN WITH A WDOT TYPE HR OR FF GEOTEXTILE FABRIC TO PREVENT MIGRATION OF UNERLYING SOIL INTO THE STONE.
5. SURFACE WATERS MUST BE PREVENTED FROM PASSING THROUGH THE CONSTRUCTION ENTRANCE. FLOWS SHALL BE DIVERTED AWAY FROM THE CONSTRUCTION ENTRANCE OR CONVEYED UNDER AND AROUND THEM BY USE OF A CULVERT. DIVERSION BERM OR OTHER PRACTICES AS APPROVED BY THE CONSTRUCTION ENGINEER.
6. CLEANING BY SCRAPING OR ADDING NEW STONE SHALL BE REQUIRED IF ENTRANCE BECOMES MORE THAN 50% COVERED BY TRACKED MUD.

2012

CITY OF MADISON
ENGINEERING DIVISION

CONSTRUCTION ENTRANCE

STANDARD DETAIL DRAWING 1.07

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
CONSTRUCTION DETAILS

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019
FILE NO. **8190-10020**

BID SET

SHEET NO. **DT-01**

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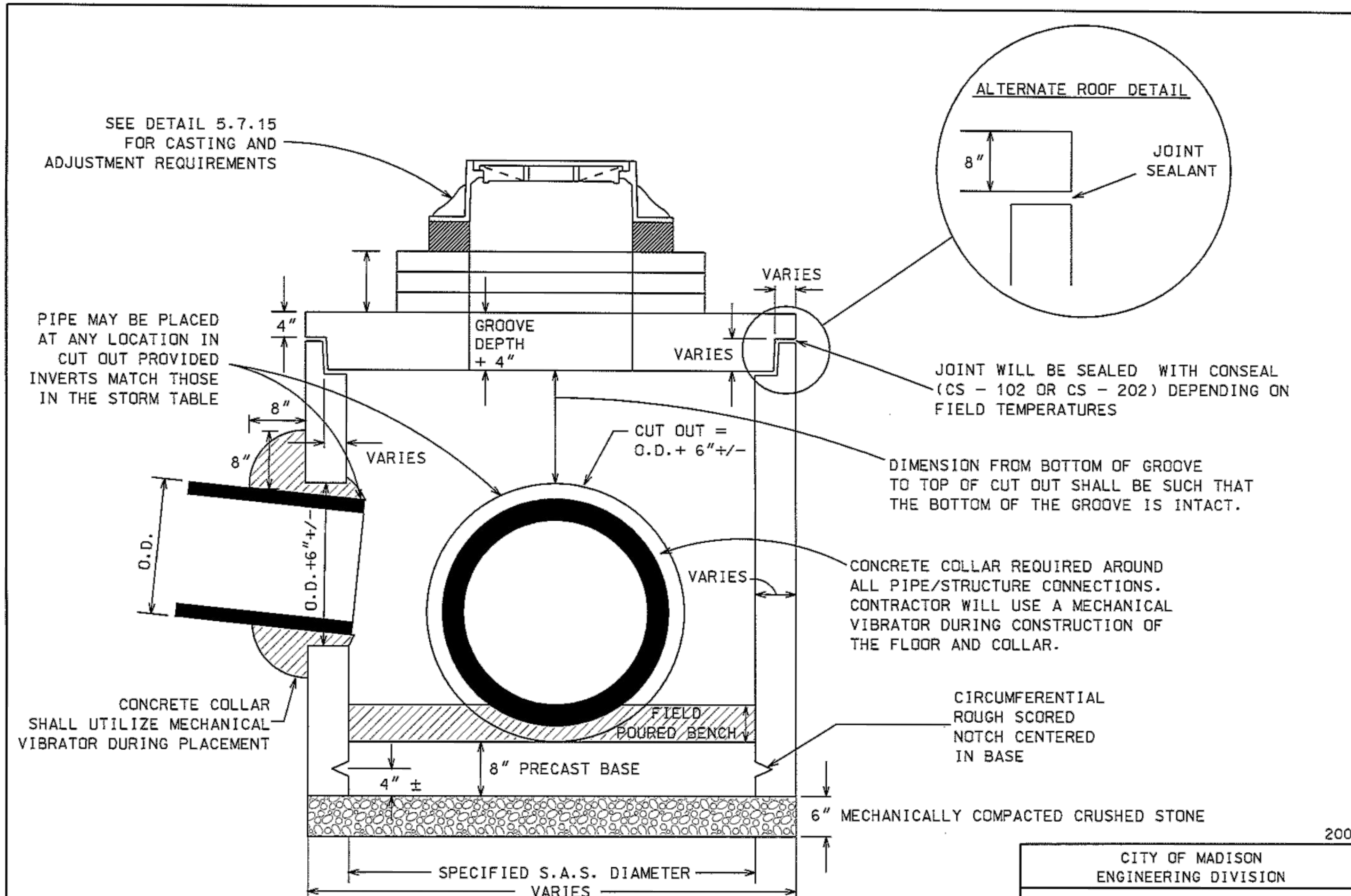

5.7.5

2006

CITY OF MADISON
ENGINEERING DIVISION

STORM SEWER PRECAST SAS (THROUGH SECTION VIEW)

STANDARD DETAIL DRAWING 5.7.5

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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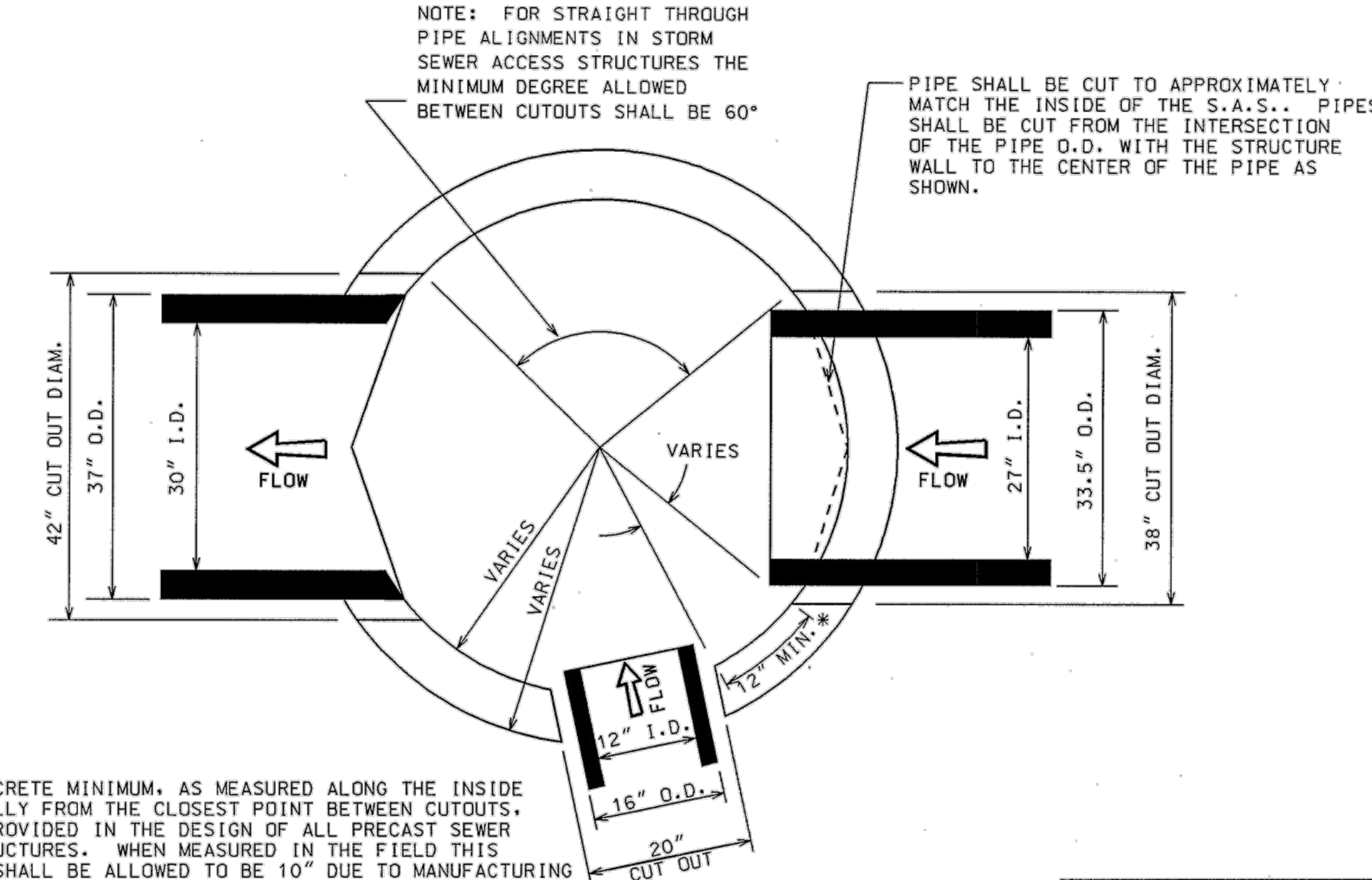
NOTE: ALL STORM SEWER ACCESS STRUCTURES (S.A.S.) SHALL BE CONSTRUCTED IN COMPLIANCE WITH ASTM C478



* 12" OF CONCRETE MINIMUM, AS MEASURED ALONG THE INSIDE WALL RADIALLY FROM THE CLOSEST POINT BETWEEN CUTOUTS, SHALL BE PROVIDED IN THE DESIGN OF ALL PRECAST SEWER ACCESS STRUCTURES. WHEN MEASURED IN THE FIELD THIS DIMENSION SHALL BE ALLOWED TO BE 10" DUE TO MANUFACTURING TOLERANCES. STRUCTURES WITH LESS THAN 10" SHALL ONLY BE ALLOWED WITH THE CONSTRUCTION ENGINEER'S APPROVAL.

** NOTE: PIPES SHOWN IN VARIOUS CONSTRUCTION STAGES FOR ILLUSTRATIVE PURPOSES.

5.7.6

2004

CITY OF MADISON
ENGINEERING DIVISION

STORM SEWER PRECAST SAS (TOP VIEW)

STANDARD DETAIL DRAWING 5.7.6

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XREFS:rm2234c; CGDTRR01; RMLOGO-BRANCH OFFICES; CGDT-STORM MANHOLE-01; ACAD-EC-DITCH-03
G:\C3D\8190_American Family\10020\dwg\CONSTRUCTION DETAILS - 1.dwg

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

REVISIONS: 7, 6, 5, 4, 3, 2, 1

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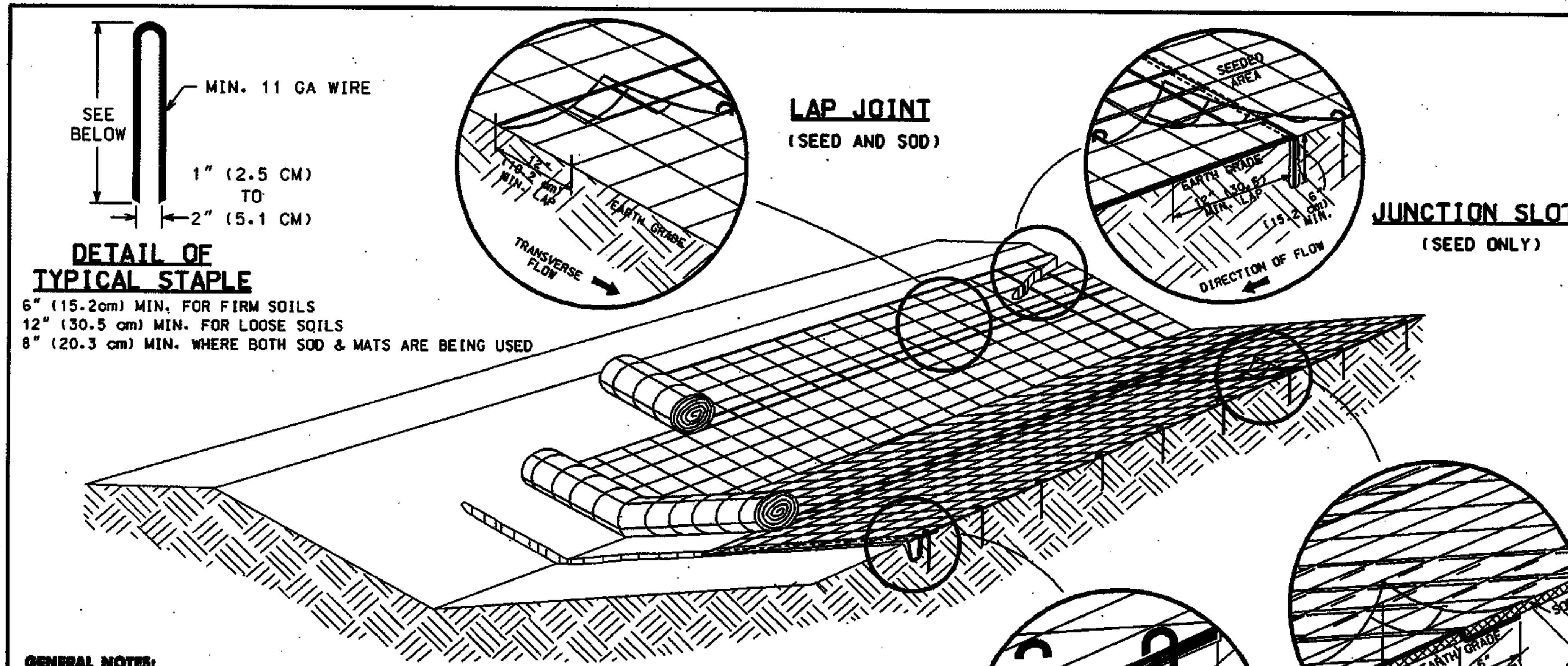

GENERAL NOTES:

DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

VARIATIONS IN THE DIMENSIONS OR MATERIALS SHOWN HEREON SHALL BE PERMITTED IF THEY PROVIDE EQUIVALENT PROTECTION AND MATERIAL STRENGTH AND IF PRIOR APPROVAL OF THE ENGINEER IS OBTAINED.

LAP JOINTS SHALL NOT BE PLACED IN THE BOTTOM OF V-SHAPED DITCHES.

JUNCTION SLOTS ON ADJACENT STRIPS OF MATTING SHALL BE STAGGERED A MINIMUM OF 4 FEET (1.219 m) APART.

EROSION MAT SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

EROSION MAT OVER SOD:

a. ONLY JUTE FABRIC WILL BE PERMITTED OVER SOD.

b. WOOD STAKES FOR SOD MAY BE OMITTED BY THE ENGINEER IF EXISTING SLOPE AND SOIL CONDITIONS SO WARRANT.

c. THE WIDTH OF EROSION MAT SHALL ALWAYS EXCEED THE SOD WIDTH.

EROSION MAT OVER SEEDING:

JUNCTION OR ANCHOR SLOTS SHALL BE AT MINIMUM INTERVALS OF 100 FEET (30.48 m) ON GRADES UP TO AND INCLUDING 3 PERCENT, AND 50 FEET (15.24 m) ON GRADES EXCEEDING 3 PERCENT.

DRAWING NOT TO SCALE

2004

CITY OF MADISON
ENGINEERING DIVISION

EROSION MAT

STANDARD DETAIL DRAWING 1.02

1.02

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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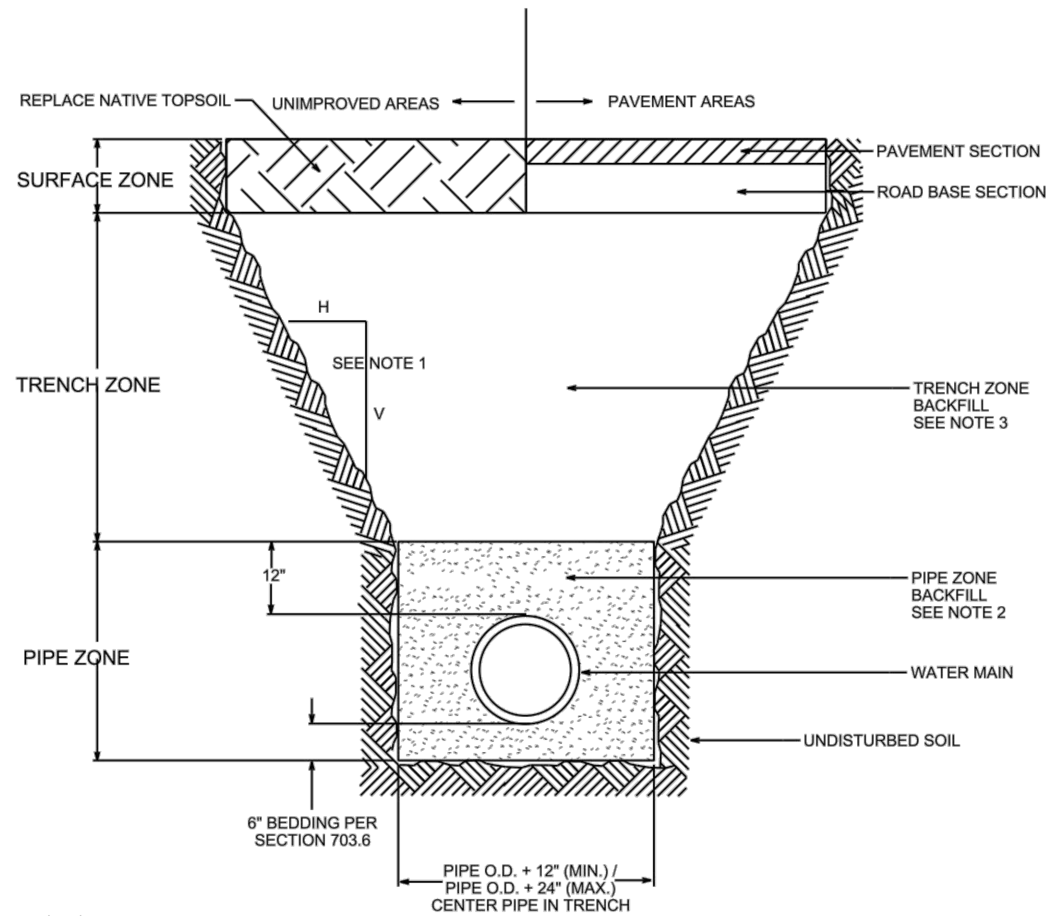
SHEET NO. DT-04

PART VII - WATER MAINS AND SERVICE LATERALS

DETAIL DRAWING NO. **7.01**

REVISED: 12/2015



NOTES:

1) ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE WISCONSIN ADMINISTRATIVE CODE FOR "TRENCH EXCAVATION AND TUNNEL CONSTRUCTION" AND ANY ADDITIONAL REQUIREMENTS INCLUDING IN THE CONTRACT DOCUMENTS.

2) BACKFILL OPERATIONS SHALL COMPLY WITH SECTIONS 703.6 AND 202.2(B) OF THE STANDARD SPECIFICATIONS.

3) THE PIPE ZONE BEDDING MATERIAL SHALL CONSIST OF SELECT FILL SAND, LIMESTONE SCREENINGS, CLEAR STONE, OR WASHED GRAVEL.

4) SEE SECTION 703.6.1 FOR BACKFILL/COMPACTION REQUIREMENTS OF BEDDING/COVER MATERIAL IN THE PIPE ZONE.

5) TRENCH ZONE COMPACTION REQUIREMENTS:
-- ALL COMPACTION OPERATIONS SHALL COMPLY WITH SECTION 703.6.3
-- DENSITY REQUIREMENTS:
1. FROM 2-FEET OVER THE PIPE TO WITHIN 3-FEET OF THE SUBGRADE: A MINIMUM OF 90% OF MAXIMUM DENSITY.
2. WITHIN 3-FEET OF THE BOTTOM OF SUBGRADE: A MINIMUM OF 95% OF MAXIMUM DENSITY.

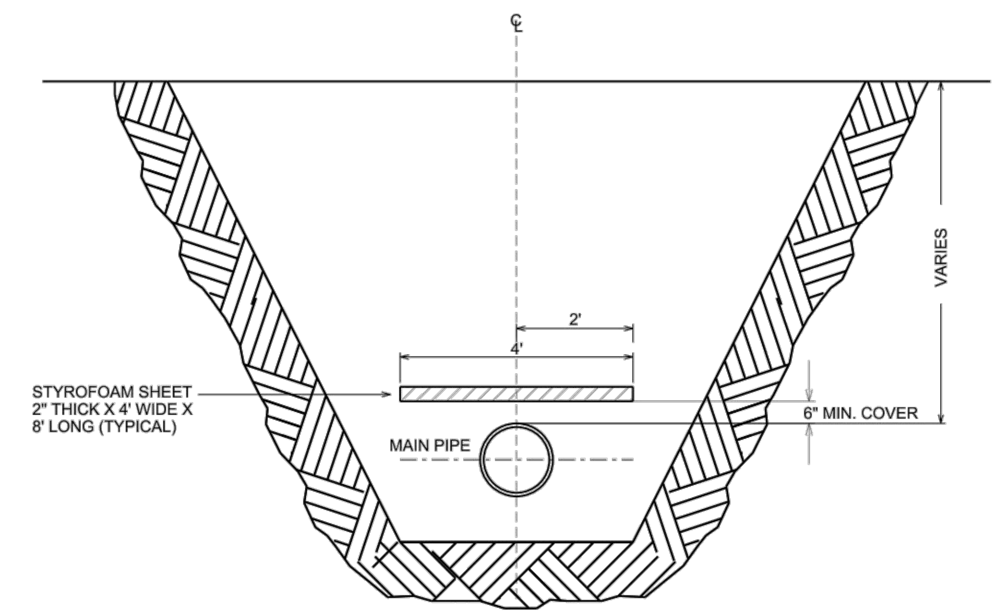
CITY OF MADISON WATER UTILITY	NOT TO SCALE	TYPICAL WATER PIPE TRENCH

City of Madison Standard Specifications for Public Works Construction

PART VII - WATER MAINS AND SERVICE LATERALS

DETAIL DRAWING NO. **7.03**

REVISED: 12/2015



NOTE: ALL STYROFOAM TO BE 2" THICK HIGH DENSITY POLYSTYRENE BOARD

CITY OF MADISON WATER UTILITY	NOT TO SCALE	TYPICAL STYROFOAM INSTALLATION

City of Madison Standard Specifications for Public Works Construction

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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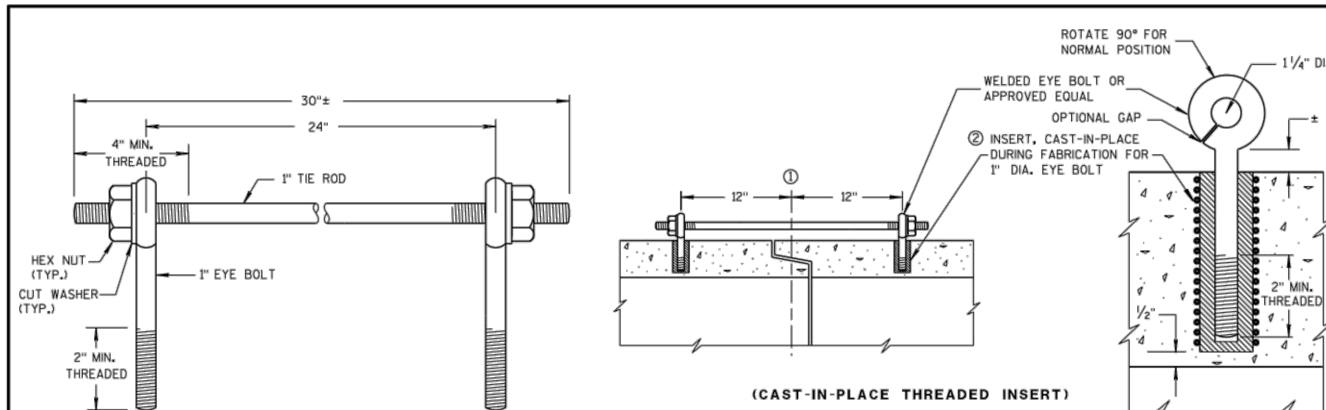


EYE BOLTS AND TIE ROD

(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

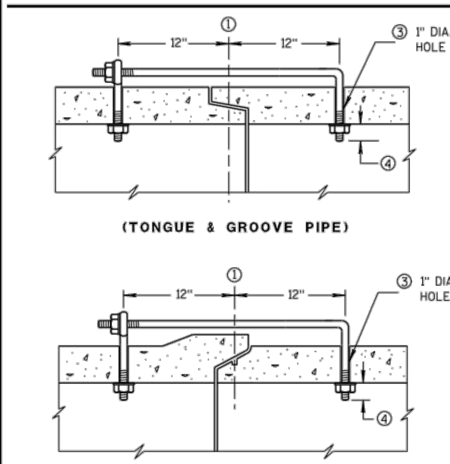
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



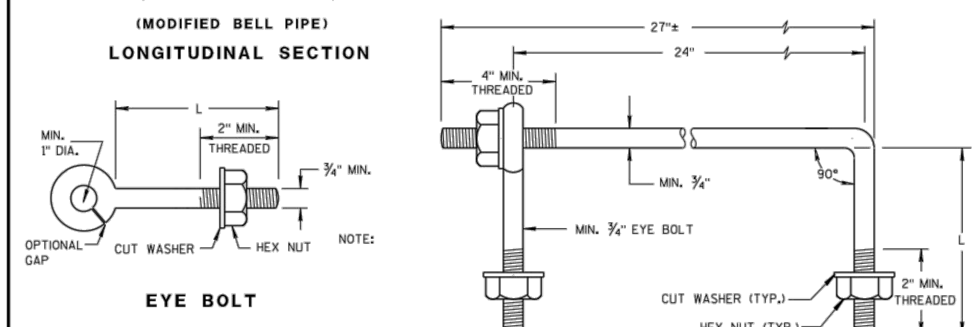
(TONGUE & GROOVE PIPE)

(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

EYE BOLT AND TIE ROD

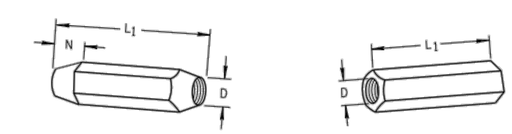
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES

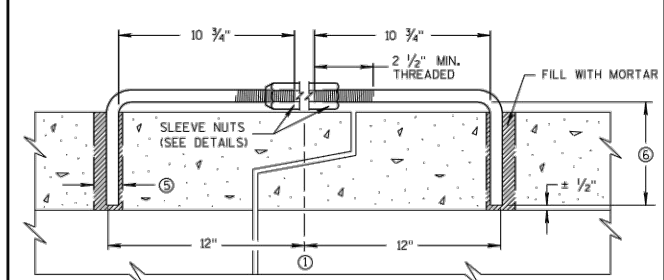


TAPERED

PLAIN

RIGHT AND LEFT THREADS

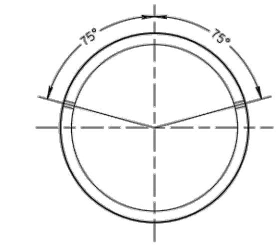
SLEEVE NUTS



LONGITUDINAL SECTION

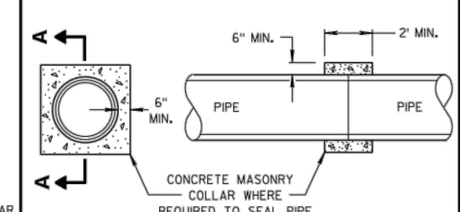
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

NOT TO SCALE 2018

CITY OF MADISON
ENGINEERING DIVISION

CONCRETE PIPE JOINT TIES

STANDARD DETAIL DRAWING 5.4.6

5.4.6

BID SET

SECTION(s): 22NE RANGE: 10E TOWN: 8N

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DATE: OCTOBER 4, 2019
FILE NO. 8190-10020

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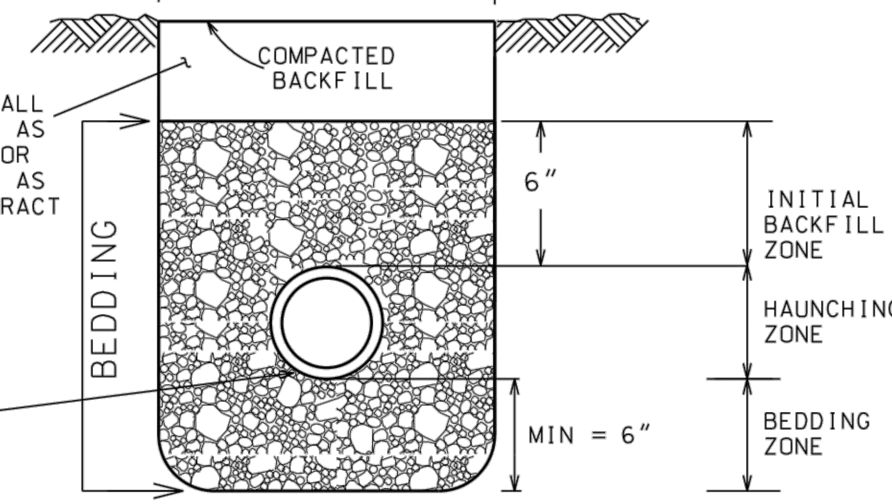
G:\C3D\8190_American Family\10020\dwg\CONSTRUCTION DETAILS - 1.dwg

5.2.1A



BEDDING FOR TYPE II, TYPE III, AND TYPE IV STORM PIPE, SECTION 1 OF S.D.D 5.2.2

NOTES:

THE COSTS OF BEDDING SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PIPE.
THE BEDDING INCLUDES THE HAUNCHING, BEDDING & INITIAL BACKFILL ZONES.
THE BEDDING SHALL BE INSTALLED & COMPACTED IN 6″ MAXIMUM LIFTS, AND SHOVEL COMPACTION UNDER THE HAUNCH OF PIPE IS REQUIRED.

ALL TRENCHES SHALL BE HAND BACKFILLED TO A POINT 12″ ABOVE THE TOP OF THE PIPE. ALL BEDDING SHALL BE MECHANICALLY COMPACTED.

PAYMENT SHALL NOT BE MADE FOR BACKFILL WITH EXCAVATED MATERIAL, IF APPROVED. SELECT FILL, IF REQUIRED, SHALL BE PAID PER CONTRACT.

THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MIN SPECIFIED PLUS 12″, AND SHALL APPLY FROM THE BOTTOM OF THE TRENCH TO A POINT 12″ ABOVE THE TOP OF THE PIPE. WHERE THIS WIDTH IS EXCEEDED, THE CONTRACTOR SHALL FURNISH AND INSTALL A HIGHER TYPE OF BEDDING AT NO EXTRA COST. THE TYPE OF BEDDING SHALL BE DETERMINED BY THE ENGINEER.

O.D. EQUALS THE OUTSIDE DIAMETER OF THE PIPE.

DRAWING NOT TO SCALE

2017

CITY OF MADISON
ENGINEERING DIVISION

STORM PIPE BEDDING AND BACKFILL- SECTION 1 OF S.D.D.5.2.2

STANDARD DETAIL DRAWING 5.2.1A

RM2234C

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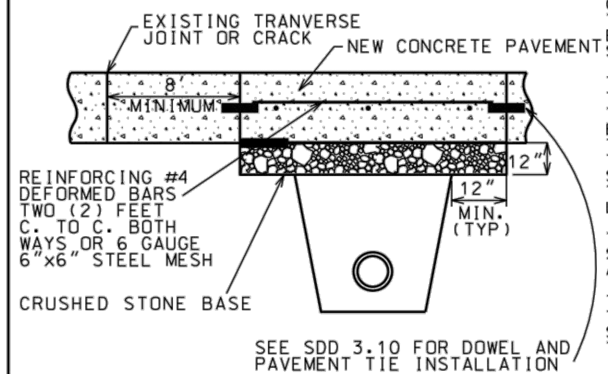
TYPE I
CONCRETE PAVEMENT



TYPE I UTILITY TRENCH PATCH

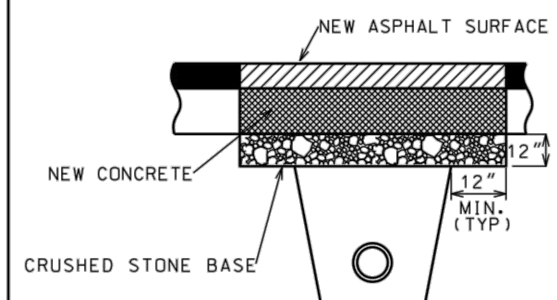
THE PAVEMENT SHALL BE REMOVED IN TWO STAGES. THE INITIAL PAVEMENT REMOVAL SHALL BE LIMITED TO THE AREA OF THE PROPOSED TRENCH. FULL-DEPTH SAWCUTTING WILL NOT BE REQUIRED FOR THIS PHASE OF THE PAVEMENT REMOVAL. AFTER THE TRENCH HAS BEEN BACKFILLED AND COMPACTED, AND AFTER THE BASE HAS BEEN RESTORED IN THE AREA OF THE TRENCH, AND AFTER SAWCUTTING THE NEW JOINTS THE FULL DEPTH OF THE EXISTING PAVEMENT (INCIDENTAL), THE REMAINING PAVEMENT TO BE REMOVED SHALL BE REMOVED WITHOUT DISTURBING THE EXISTING BASE.

THE SIZE OF THE PATCH SHALL BE DETERMINED BY THE TOP WIDTH OF THE TRENCH, THE LOCATION AND SKEW OF THE EXISTING TRANSVERSE JOINTS, THE CONDITION OF THE EXISTING PAVEMENT, AND THE CONDITION OF THE BASE. NEW TRANSVERSE JOINTS SHALL BE PARALLEL TO THE EXISITING TRANSVERSE JOINTS, AND SHALL BE A MININUM OF ONE (1) FOOT FROM THE TRENCH. THE DISTANCE BETWEEN NEW AND EXISTING TRANSVERSE JOINTS SHALL BE A MINIMUM OF EIGHT (8) FEET, MEASURED PERPENDICULAR TO THE JOINTS. THE PATCH SHALL BE A MINIMUM OF EIGHT (8) FEET IN LENGTH, AND SHALL HAVE THE SAME WIDTH AS THE PAVEMENT LANE.

THE PATCH SHALL BE TEN (10) INCHES IN THICKNESS OF HIGH EARLY STRENGTH CONCRETE, DOWELED AND TIED WITH EPOXY COATED BARS, AND REINFORCED, ALL IN ACCORDANCE WITH THE TYPICAL SECTION.

THE TRANSVERSE EDGES OF THE FINISHED PATCH SHALL BE FLUSH WITH THE EDGES OF THE EXISTING CONCRETE PAVEMENT. THE LONGITUDINAL SURFACE SHALL FORM A STRAIGHT LINE FROM EDGE TO EDGE WITHIN A TOLERANCE OF 1/8 INCH.

TYPE II
CONCRETE WITH ASPHALTIC OVERLAY



TYPE II UTILITY TRENCH PATCH

THE PATCH SHALL BE 7" HIGH EARLY STRENGTH CONCRETE BASE WITH THE SAME REINFORCEMENT AS THE EXISTING CONCRETE BASE, OVERLAID WITH ASPHALT UPPER LAYER. WHERE SPECIFIED, OR DIRECTED BY THE ENGINEER, THE BASE SHALL BE CONSTRUCTED OF ASPHALTIC BASE COURSE MATERIAL, SHALL BE THE SAME THICKNESS AS THE EXISTING BASE, AND SHALL BE LAID IN TWO OR MORE COMPACTED LIFTS OF NOT MORE THAN 3" IN THICKNESS EACH.

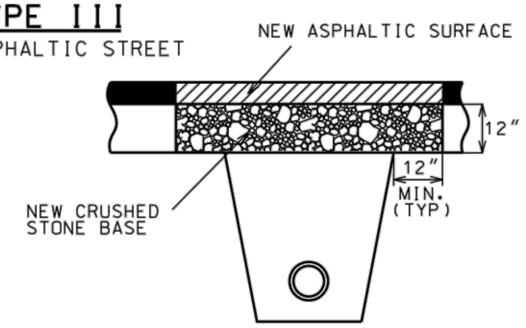
THE PAVEMENT ALONG THE PATCH SHALL BE SAWCUT, FULL DEPTH, AND INCIDENTAL TO THE TRENCH PATCH. THE EDGES OF THE PATCH SHALL BE VERTICAL, FREE OF LOOSE STONES OR CONCRETE PIECES, AND SHALL BE THOROUGHLY WETTED JUST PRIOR TO POURING THE NEW CONCRETE BASE.

THE TOP OF THE NEW CONCRETE OR ASPHALT BASE SHALL BE FLUSH WITH THE TOP OF THE EXISTING CONCRETE BASE.

PRIOR TO PLACING THE ASPHALT UPPER LAYER, THE EDGES OF THE PATCH AND THE SURFACE OF THE NEW CONCRETE BASE SHALL BE THOROUGHLY TACKED WITH LIQUID ASPHALT.

THE ASPHALT UPPER LAYER SHALL BE OF THE SAME THICKNESS AS THE EXISTING ASPHALT OVERLAY WITH A MINIMUM THICKNESS OF 3" AND A MAXIMUM THICKNESS OF 6" UNLESS OTHERWISE SPECIFIED AND SHALL BE LAID IN ONE OR MORE COURSES AS DIRECTED BY THE ENGINEER. THE ASPHALTIC UPPER LAYER SHALL BE MACHINE LAID WHERE DIRECTED BY THE ENGINEER. WHERE THE ASPHALTIC UPPER LAYER IS MACHINE LAID, AND IS NOT MORE THAN 3" IN THICKNESS, THE ASPHALTIC SURFACE MAY BE LAID IN ONE LIFT.

TYPE III
ASPHALTIC STREET



TYPE III UTILITY TRENCH PATCH

THE PATCH SHALL BE CRUSHED STONE BASE COURSE, GRADATION NO. 2 OVERLAID WITH ASPHALT UPPER LAYER EQUAL IN THICKNESS TO THE EXISTING ASPHALTIC PAVEMENT,WITH A MINIMUM THICKNESS OF 3.5" AND A MAXIMUM THICKNESS OF 6" UNLESS OTHERWISE SPECIFIED AND LAID IN ONE OR MORE COURSES AS DIRECTED BY THE ENGINEER.

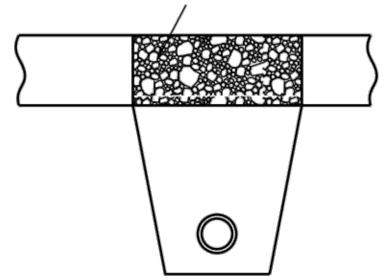
THE PAVEMENT ALONG THE PATCH SHALL BE SAWCUT, FULL DEPTH, AND INCIDENTAL TO THE TRENCH PATCH. THE EDGES OF THE EXISTING ASPHALTIC PAVEMENT SHALL BE FREE OF LOOSE STONES OR PAVEMENT MATERIAL.

THE CRUSED STONE BASE COURSE SHALL BE INSTALLED IN TWO LIFTS. THE LOWER LIFT SHALL BE THOROUGHLY MECHANICALLY COMPACTED PRIOR TO PLACING THE UPPER LIFT.

THE ASPHALT UPPER LAYER SHALL BE LAID IN TWO LIFTS. THE ASPHALT UPPER LAYER SHALL BE MACHINE LAID WHERE DIRECTED BY THE ENGINEER. WHERE THE ASPHALTIC UPPER LAYER IS MACHINE LAID AND IS NOT MORE THAN 3" IN THICKNESS, THE ASPHALT SURFACE COURSE MAY BE IN ONE LIFT.

PRIOR TO PLACING THE ASPHALT UPPER LAYER, THE EDGES OF THE PATCH AND THE SURFACE OF THE CRUSED STONE BASE SHALL BE TACKED AND PRIMED WITH LIQUID ASPHALT.

TYPE IV
NEW CRUSHED STONE PAVEMENT



TYPE IV UTILITY TRENCH PATCH

THE PATCH SHALL BE 12" CRUSHED STONE BASE COURSE, GRADATION NO. 2. FULL DEPTH SAWCUTTING OF ADJACENT PAVEMENT (IF ANY) SHALL BE CONSIDERED INCIDENTAL TO THE TRENCH PATCH.

THE CRUSHED STONE BASE COURSE SHALL BE INSTALLED IN THREE LIFTS. EACH LIFT SHALL BE THOROUGHLY MECHANICALLY COMPACTED PRIOR TO PLACING SUCCEEDING LIFTS.

CITY OF MADISON
ENGINEERING DIVISION

TYPICAL PAVEMENT PATCH SECTIONS

2019

STANDARD DETAIL DRAWING 5.2.4

5.2.4

THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
CONSTRUCTION DETAILS

CITY OF MADISON
DANE COUNTY, WISCONSIN

Ruekert · Mielke
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TOWN: 8N RANGE: 10E SECTION(s): 22NE

REVISIONS 1 2 3 4 5 6 7

BID SET

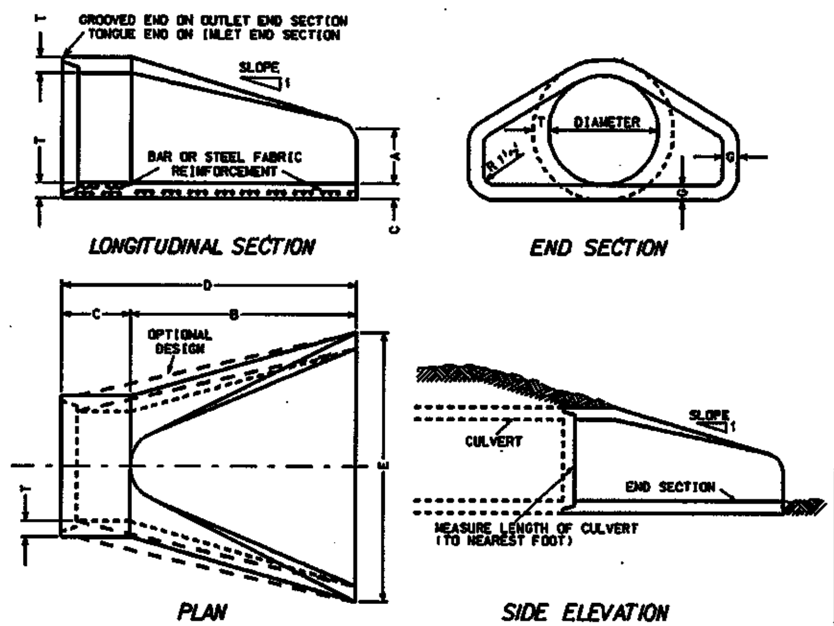
DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019
FILE NO. 8190-10020

BID SET

SHEET NO. DT-08

Oct 18, 2019 11:34am PLOTTED BY:GDeprey SAVED BY:GDeprey
IMAGES:Apron Endwalls; Erosion Mat Detail; RM SQUARE_Full Color-Print;
XREFS:rm2234c; CGDTRR01; RMLOGO-BRANCH OFFICES; CGDT-STORM MANHOLE-01; ACAD-EC-DITCH-03
G:\C3D\8190_American Family\10020\dwg\CONSTRUCTION DETAILS - 1.dwg
RM2234C

REINFORCED CONCRETE APRON ENDWALLS



DIA	APPROX. WEIGHT/ SECTION	T	A	B	C	D	E	G	APPROX. SLOPE
12"	530	2"	4"	24"	48 1/8"	72 7/8"	24"	2"	3 TO 1
15"	740	2 1/4"	6"	27"	46"	73"	30"	2 1/4"	3 TO 1
18"	990	2 1/2"	9"	27"	46"	73"	36"	2 1/2"	3 TO 1
21"	1280	2 3/4"	9"	36"	37 1/2"	73 1/2"	42"	2 3/4"	3 TO 1
24"	1520	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3"	3 TO 1
27"	1930	3 1/4"	10 1/2"	49 1/2"	24"	73 1/2"	54"	3 1/4"	3 TO 1
30"	2190	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3 1/2"	3 TO 1
36"	4100	4"	15"	63"	34 3/4"	97 3/4"	72"	4"	3 TO 1
42"	5380	4 1/2"	21"	63"	35"	98"	78"	4 1/2"	3 TO 1
48"	6550	5"	24"	72"	26"	98"	84"	5"	3 TO 1
54"	8040	5 1/2"	27"	65"	33 1/4"/35"	98 1/4"/100"	90"	5"	2 1/2 TO 1
60"	8730	6"	30"/35"	60"	39"	99"	96"	5"	2 TO 1
66"	10630	6 1/2"	24"/30"	72"/78"	21"/27"	99"	102"	5 1/2"	2 TO 1
72"	12520	7"	24"/36"	78"	21"	99"	108"	6"	2 TO 1
78"	14430	7 1/2"	24"/36"	78"	21"	99"	114"	6 1/2"	2 TO 1
84"	18160	8"	36"	90 1/2"	21"	111 1/2"	120"	6 1/2"	1 1/2 TO 1

NOTE: MINIMUM/MAXIMUM

GENERAL NOTES:

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

VARIATIONS OF THE DIMENSIONS AND DESIGNS SHOWN BEFORE WILL BE PERMITTED PROVIDING EQUIVILENT CAPACITY AND STRUCTURAL INTEGRITY ARE ATTAINED, AND PRIOR APPROVAL OF THE ENGINEER IS OBTAINED.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA.

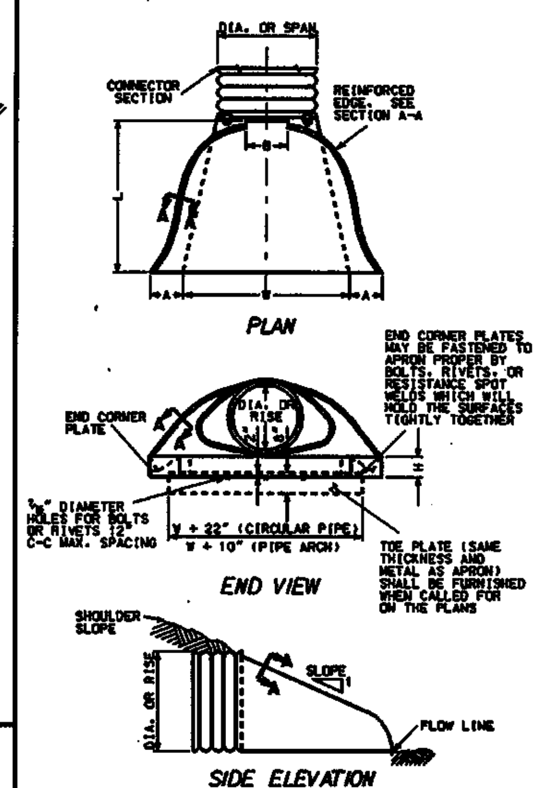
GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL. THE USE OF GALVANIZED STEEL ENDWALLS ON ALUMINUM PIPES IS PERMITED, PROVIDED THE TWO METALS AT THE JOINT INTERFACE ARE KEPT SEPARATED BY A SUITABLE INSULATING MATERIAL APPROXIMATELY 1/16" THICK OR GREATER. SUCH MATERIAL WOULD BE AN ASPHALT IMPREGNATED FABRIC, A SHEET PLASTIC, A RUBBER GASKET OR OTHER NONBIODEGRADABLE MATERIAL OF SUBSTANTIAL STRENGTH.

WHEN TWO OR MORE PIPE ARCHES WITH APRON ENDWALLS ARE TO BE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY THE FOLLOWING AMOUNT.
PIPES: TOTAL WIDTH OF APRON ENDWALL LESS THE DIAMTER OF PIPE PLUS 6 INCHES.
PIPE ARCHES: TOTAL WIDTH OF APRON ENDWALL LESS THE SPAN DIMENSION OF THE PIPE ARCH PLUS 6 INCHES.

METAL APRON ENDWALLS FOR PIPE ARCHES

PIPE-ARCH DIMENSIONS SPAN	PIPE-ARCH DIMENSIONS RISE	MIN. METAL THICK	DIMENSIONS A +/-1"	B MAX	H +/-1"	L +/-1 1/2"	W +/-2"	APPROX. SLOPE
17"	13"	0.064	7"	9"	6"	19"	31"	2 1/2 TO 1
21"	15"	0.064	7"	10"	6"	23"	26"	2 1/2 TO 1
24"	18"	0.064	8"	12"	6"	28"	42"	2 1/2 TO 1
28"	20"	0.064	9"	14"	6"	32"	48"	2 1/2 TO 1
35"	24"	0.079	10"	16"	6"	39"	60"	2 1/2 TO 1
42"	29"	0.079	12"	18"	8"	46"	75"	2 1/2 TO 1
49"	33"	0.109	13"	21"	9"	53"	85"	2 1/2 TO 1
57"	38"	0.109	18"	26"	12"	63"	90"	2 1/2 TO 1
64"	43"	0.109	18"	30"	12"	70"	102"	2 1/4 TO 1
71"	47"	0.109	18"	33"	12"	77"	114"	2 1/4 TO 1
77"	52"	0.109	18"	36"	12"	77"	126"	2 TO 1
83"	57"	0.109	18"	39"	12"	77"	138"	2 TO 1

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED

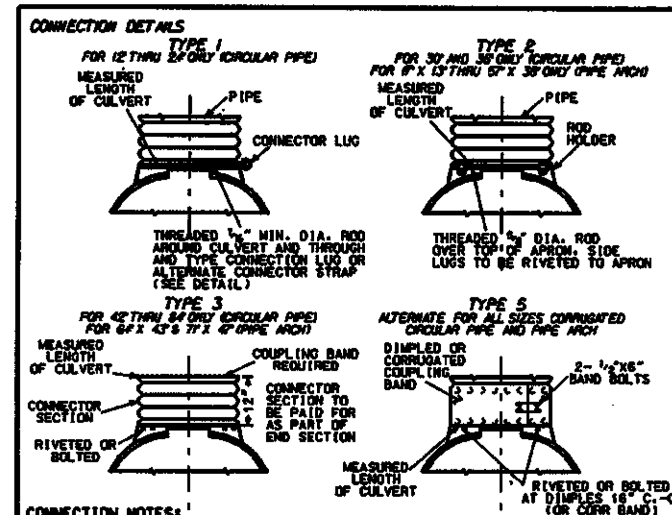


METAL OR ALUMINUM APRON ENDWALLS FOR CIRCULAR PIPES

DIA	MIN. METAL THICKNESS	MIN. ALUM THICKNESS	DIMENSIONS A +/-1"	B MAX	H +/-1"	L +/-1 1/2"	W +/-2"	APPROX. SLOPE
12"	0.064	0.060	6"	6"	6"	21"	24"	2 1/2 TO 1
15"	0.064	0.060	7"	8"	6"	26"	30"	2 1/2 TO 1
18"	0.064	0.060	8"	10"	6"	31"	36"	2 1/2 TO 1
21"	0.064	0.060	9"	12"	6"	36"	42"	2 1/2 TO 1
24"	0.064	0.075	10"	13"	6"	41"	48"	2 1/2 TO 1
30"	0.079	0.075	12"	16"	8"	51"	60"	2 1/2 TO 1
36"	0.079	0.105	14"	19"	9"	60"	72"	2 1/2 TO 1
42"	0.109	0.105	16"	22"	11"	69"	84"	2 1/2 TO 1
48"	0.109	0.105	18"	27"	12"	78"	90"	2 1/4 TO 1
54"	0.109	0.105	18"	30"	12"	84"	102"	2 TO 1
60"	0.109	N/A	18"	33"	12"	87"	114"	1 3/4 TO 1
66"	0.109	N/A	18"	36"	12"	87"	120"	1 1/2 TO 1
72"	0.109	N/A	18"	39"	12"	87"	126"	1 1/3 TO 1
78"	0.109	N/A	18"	42"	12"	87"	132"	1 1/4 TO 1
84"	0.109	N/A	18"	45"	12"	87"	138"	1 1/4 TO 1

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED

CONNECTION DETAILS



CONNECTION NOTES:

CIRCULAR PIPE -
FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3, OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2, OR 3.

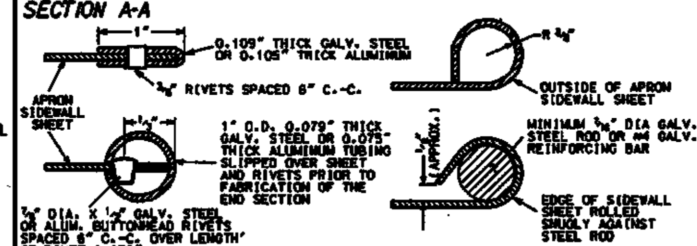
PIPE ARCH -
USE ENDWALL CONNECTION DETAILS 2, 3, OR 5 AS APPLICABLE.

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE

ALTERNATE CONNECTOR STRAP FOR TYPE 1 CONNECTION

2004

SECTION A-A



CITY OF MADISON
ENGINEERING DIVISION

APRON ENDWALLS FOR PIPES AND PIPE ARCHES

STANDARD DETAIL DRAWING 5.4.1

5.4.1

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

REVISIONS 1 2 3 4 5 6 7

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
CONSTRUCTION DETAILS

CITY OF MADISON
DANE COUNTY, WISCONSIN

DESIGNED BY: BJS
DRAFTED BY: JTK
CHECKED BY: AWB
DATE: OCTOBER 4, 2019

FILE NO. 8190-10020

BID SET

SHEET NO. DT-09

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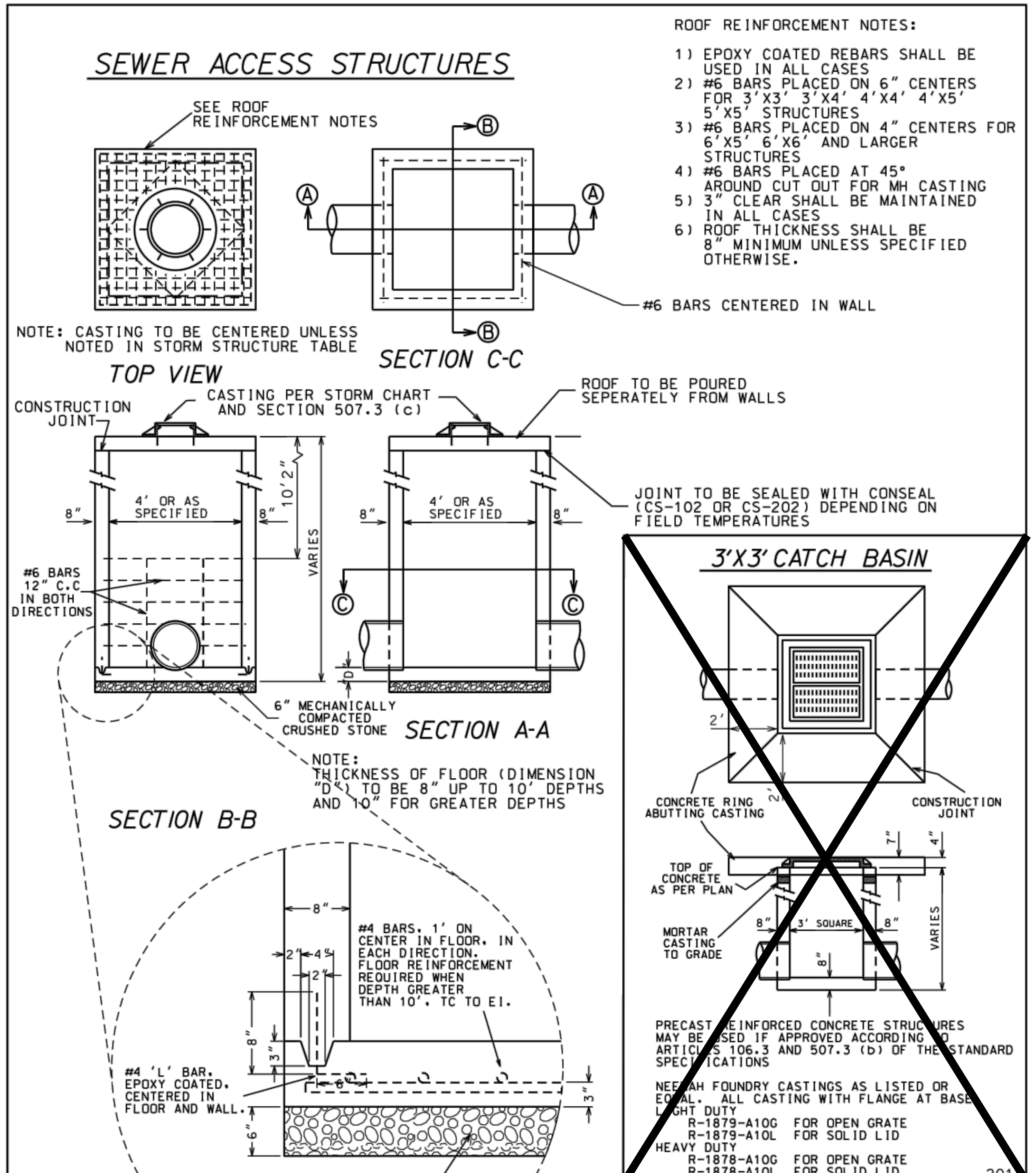

CITY OF MADISON
ENGINEERING DIVISION

STORM SEWER
FIELD POURED SAS
AND CATCH BASINS

STANDARD DETAIL DRAWING 5.7.3

5.7.3

BID SET

TOWN: 8N RANGE: 10E SECTION(s): 22NE

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THE AMERICAN CENTER OUTLOT 7 CHANNEL REALIGNMENT AND SITE IMPROVEMENTS
CONSTRUCTION DETAILS

CITY OF MADISON
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DESIGNED BY: BJS
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DATE: OCTOBER 4, 2019
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