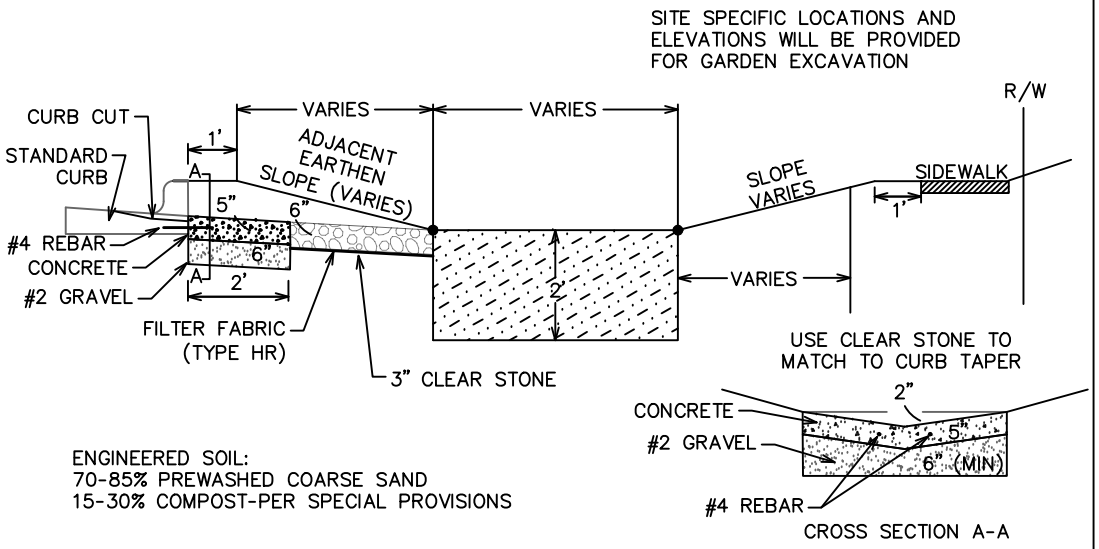
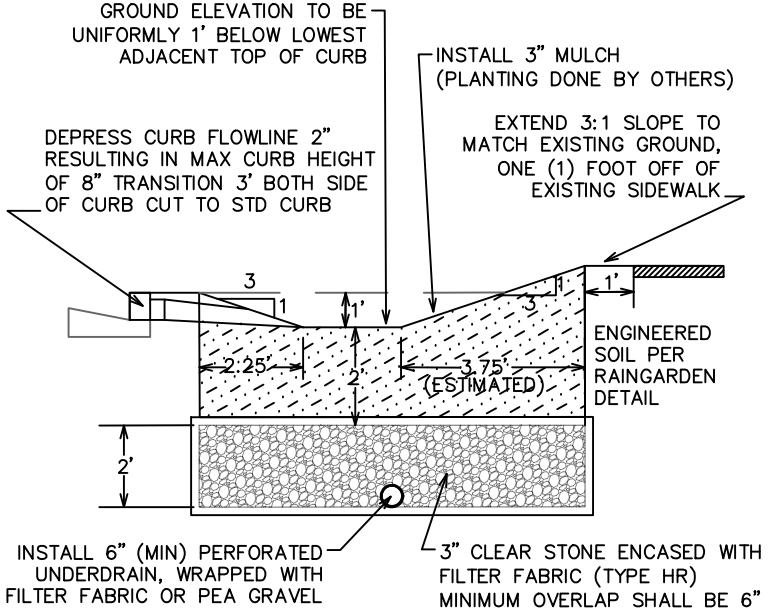
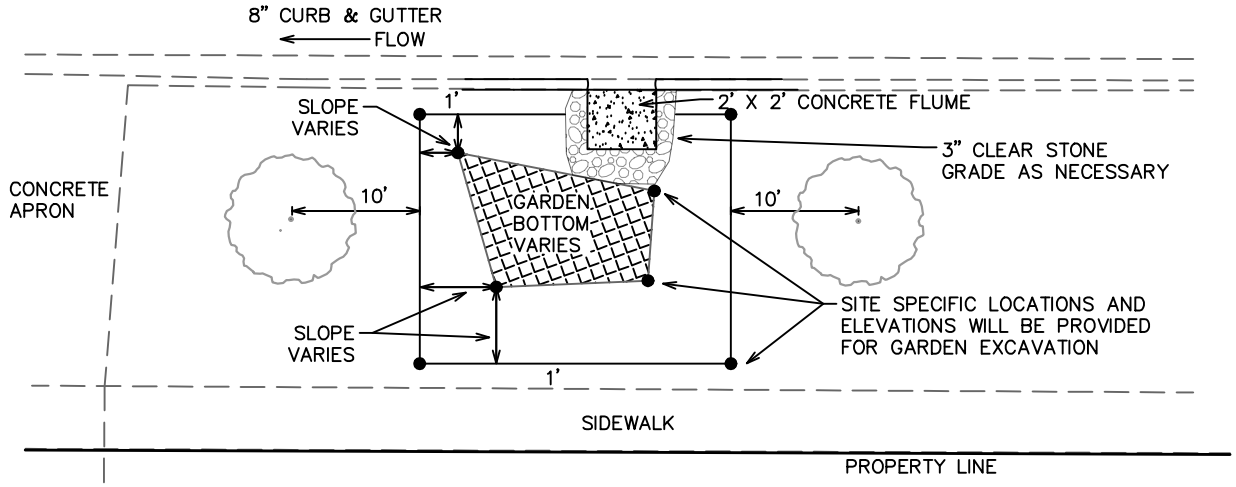
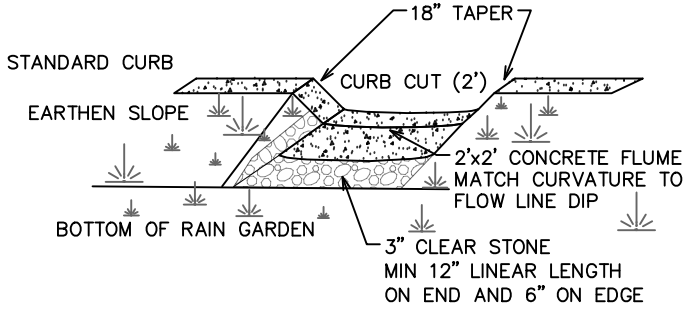
RAINGARDEN DETAIL



BIO–RETENTION DETAIL







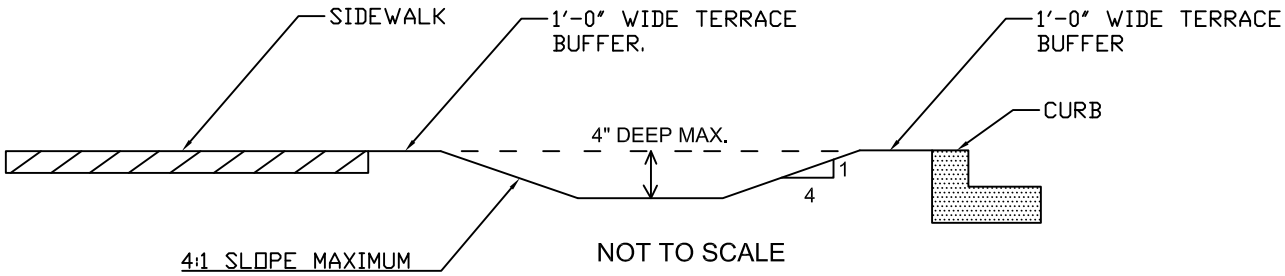
2020

CITY OF MADISON ENGINEERING DIVISION
RAINGARDEN & BIO–RETENTION DETAIL
STANDARD DETAIL DRAWING 2.09

2.09

STORMWATER TERACE DETAIL

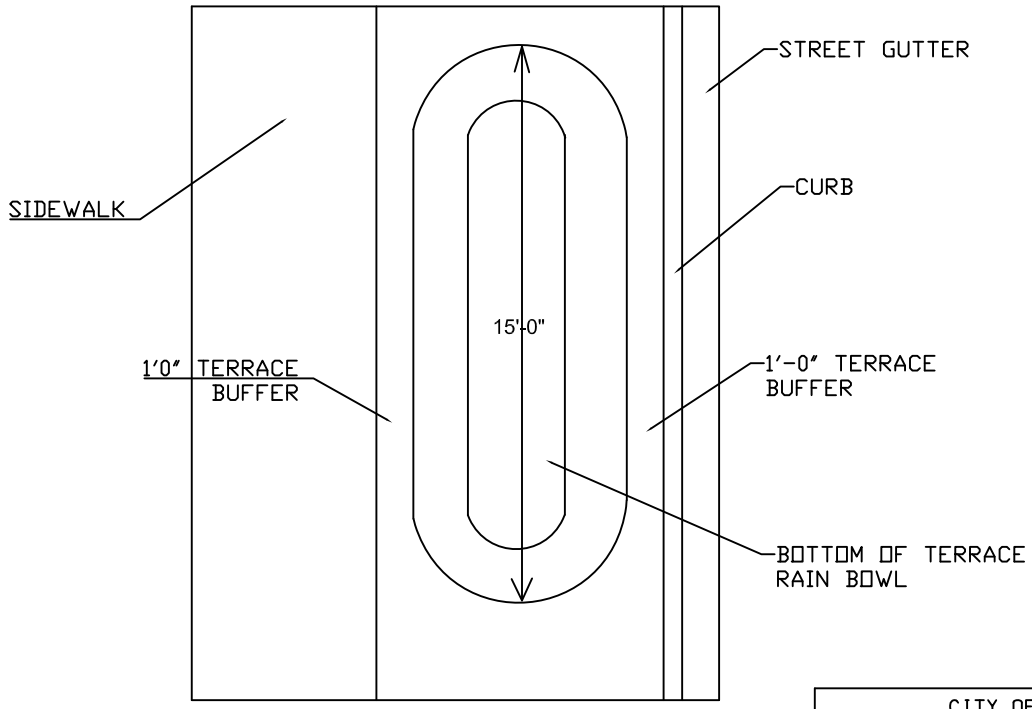
NOTE: BOTTOM SLOPE/ ELEVATION OF THE STORMWATER TERRACE SHALL PARALLEL THE ADJACENT LONGITUDINAL CURB SLOPE



NOT TO SCALE

STORMWATER TERACE PLAN VIEW

NOTE: BOTTOM SLOPE/ ELEVATION OF THE STORMWATER TERRACE SHALL PARALLEL THE ADJACENT LONGITUDINAL CURB SLOPE



NOT TO SCALE

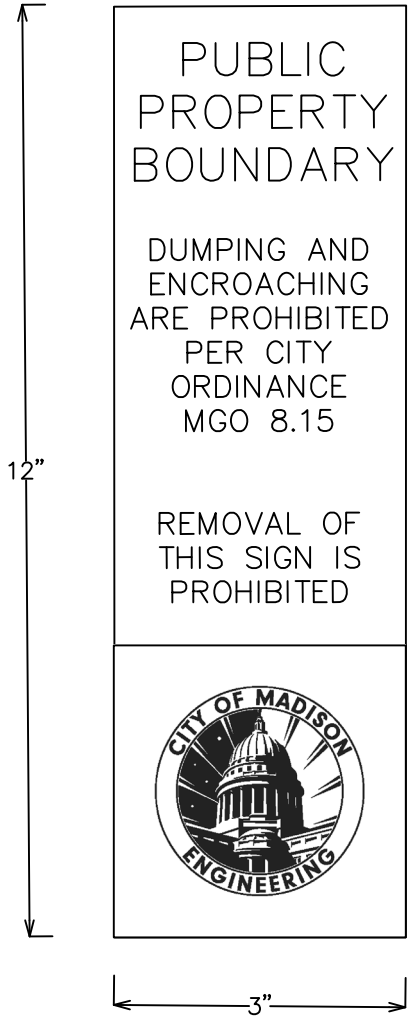
2021

CITY OF MADISON
ENGINEERING DIVISION

TERRACE
RAIN BASIN

STANDARD DETAIL DRAWING 2.10

DECAL DETAIL



2.11

GENERAL NOTES:

Property Boundary Markers shall be placed on every lot corner common with public property or as noted on the plan set.

Boundary markers shall be Carsonite Dual-Sided Trail Marker 60" Fiberglass, Color: Bronw (or approved equal) and shall have a City of Madison Engineering Division Boundary Marker logo decal.

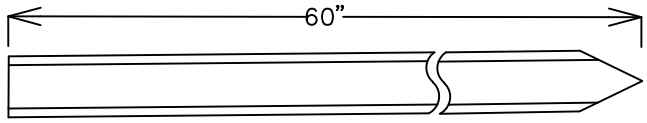
Decal 3in wide X 12in long, or as approved by the Engineer.

Boundary Markers shall be continuous glass fiber reinforced, dual sided metting the following mechanical properties:

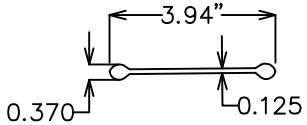
MECHANICAL PROPERTIES

PROPERTY	ASTM TEST METHOD	MINIMUM VALUE
Ultimate Tensile Strength	D-638	50,000 psi
Ultimate Compressive Strength	D-638	45,000 psi
Specific Gravity	D-792	1.7
%Glass Reinforcement	D2584	50%
Barcol Hardness	D2583	47

POST DETAIL



TOP VIEW



CROSS SECTION VIEW

2021

CITY OF MADISON
ENGINEERING DIVISION

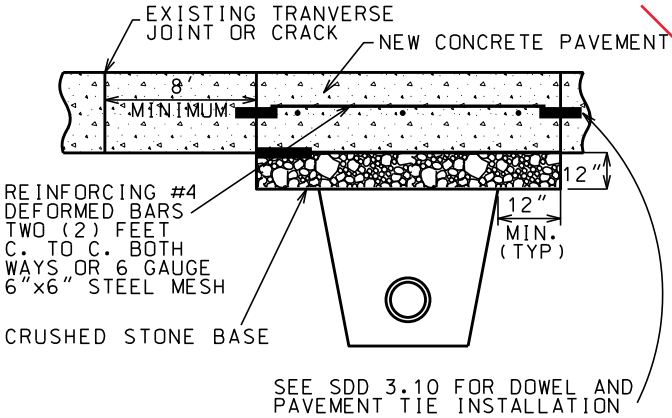
BOUNDARY MARKER

STANDARD DETAIL DRAWING 2.11

TYPE I

CONCRETE PAVEMENT

crushed stone base course,



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.

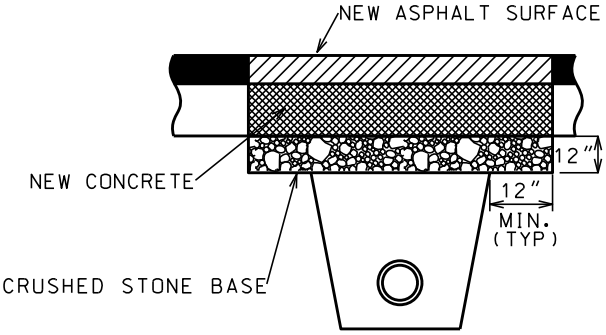
THE SIZE OF THE PATCH SHALL BE DETERMINED BY THE TOP WIDTH OF THE TRENCH, THE LOCATION AND SKEW OF THE EXISTING TRANSVERSE JOINTS, THE CONDITION OF THE EXISTING PAVEMENT, AND THE CONDITION OF THE BASE. NEW TRANSVERSE JOINTS SHALL BE PARALLEL TO THE EXISITING TRANSVERSE JOINTS, AND SHALL BE A MININUM 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.

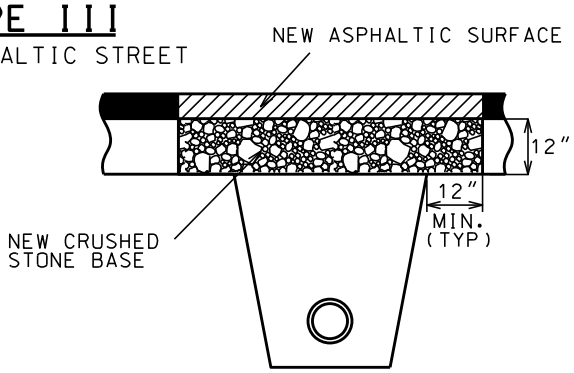
THE TOP OF THE NEW CONCRETE OR ASPHALT BASE SHALL BE FLUSH WITH THE TOP OF THE EXISTING CONCRETE BASE.

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.

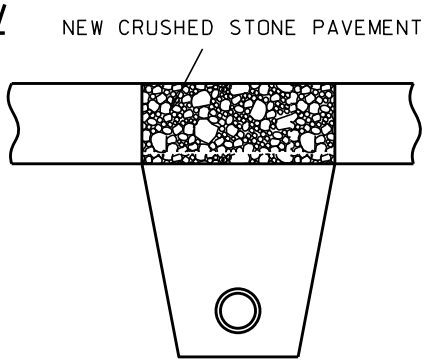
THE PAVEMENT ALONG THE PATCH SHALL BE SAWCUT, FULL DEPTH, AND INCIDENTAL TO THE TRENCH PATCH. THE EDGES OF THE EXISTING ASPHALTIC PAVEMENT SHALL BE FREE OF LOOSE STONES OR PAVEMENT MATERIAL.

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



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.

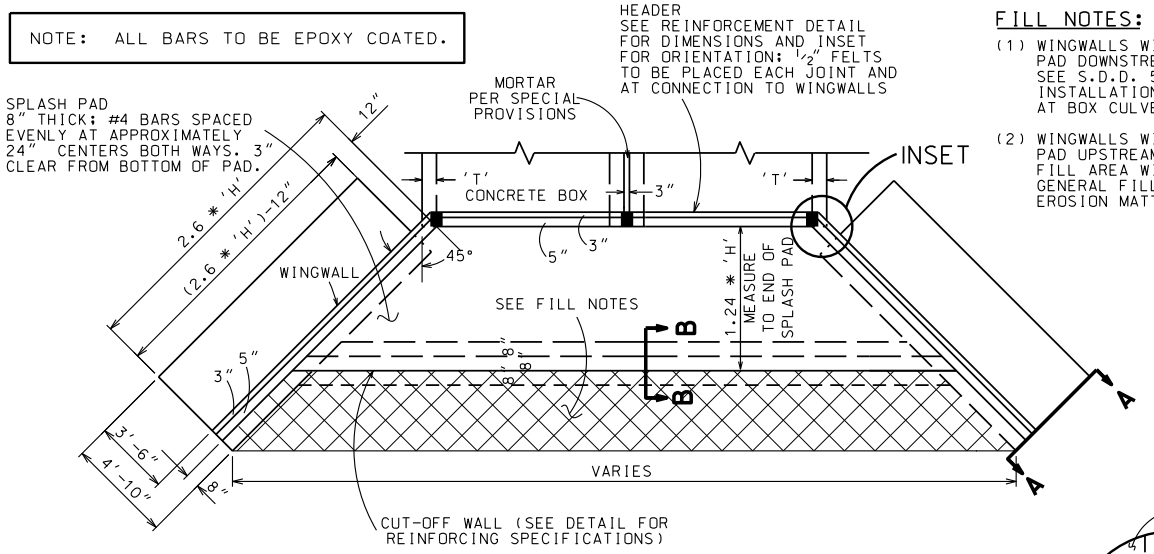
CITY OF MADISON
ENGINEERING DIVISION

TYPICAL PAVEMENT PATCH SECTIONS

2019

STANDARD DETAIL DRAWING 5.2.4

NOTE: ALL BARS TO BE EPOXY COATED.

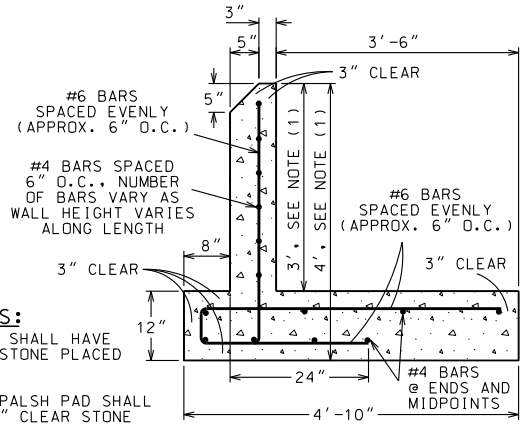


TOP VIEW
WINGWALLS WITH SPLASHPAD

FILL NOTES:

(1) WINGWALLS WITH SPLASH PAD DOWNSTREAM: SEE S.D.D. 5.5.2 FOR INSTALLATION OF RIPRAP AT BOX CULVERT WINGWALLS.

(2) WINGWALLS WITH SPLASH PAD UPSTREAM: FILL AREA WITH NON-GRANULAR GENERAL FILL OVERLAID WITH EROSION MATTING.



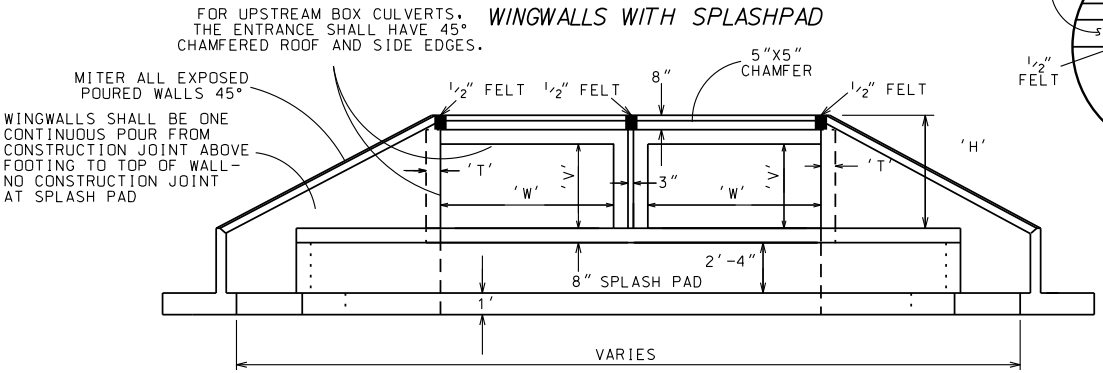
BEDDING NOTES:

(1) ALL FOOTINGS SHALL HAVE 12" OF 3" CLEAR STONE PLACED AS BEDDING.

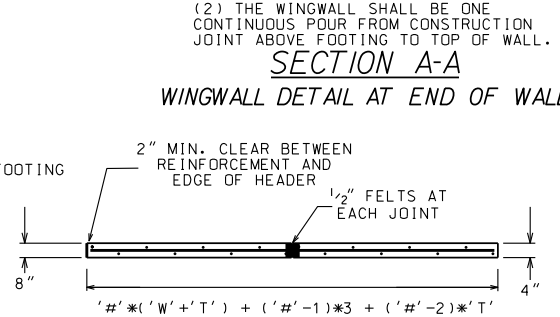
(2) AREA BELOW SPALSH PAD SHALL BE FILLED WITH 3" CLEAR STONE

NOTE:
(1) VERTICAL DIMENSION SHOWN IS AT END OF WALL. DIMENSION INCREASES ALONG WALL LENGTH. SEE SIDE VIEW.
(2) THE WINGWALL SHALL BE ONE CONTINUOUS POUR FROM CONSTRUCTION JOINT ABOVE FOOTING TO TOP OF WALL.

SECTION A-A
WINGWALL DETAIL AT END OF WALL



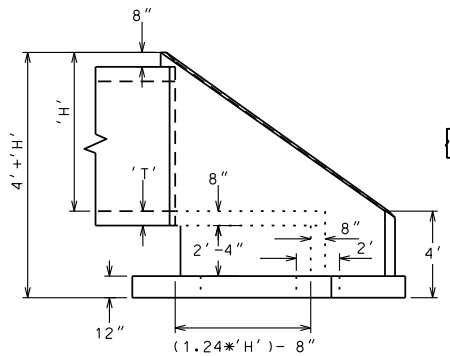
FRONT VIEW
WINGWALLS WITH SPLASHPAD



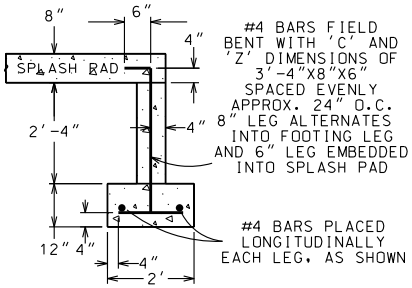
INSET

VERTICAL REINFORCEMENT PER SECTION STAGGERED
#4 BARS SPACED EVENLY ON APPROXIMATELY 1'-3" CENTERS, 2" CLEAR EACH SIDE; BARS TO BE EMBEDDED IN CONCRETE 4".
HORIZONTAL REINFORCEMENT PER SECTION:
('W' + 2 * 'T' - 4) OF #4 BAR CENTERED BOTH DIRECTION IN PROPOSED BOX CULVERT HEADER.

TOP VIEW
BOX CULVERT HEADER REINFORCEMENT DETAIL



SIDE VIEW
WINGWALLS WITH SPLASHPAD



SECTION B-B
CUT-OFF WALL DETAIL

STEEL CONNECTION NOTES:

(1) CONNECTION OF SPLASH PAD TO BOX CULVERTS:
12" LONG #6 REBARS SPACED EVENLY ON APPROXIMATELY 2'-6" CENTERS. TIGHT DRIVEN 6" INTO END OF BOX CULVERT FLOOR AND EMBEDDED 6" INTO SPLASH PAD FLOOR WITH 2" CLEAR SPACING EACH SIDE.

(2) CONNECTION OF WINGWALL TO BOX CULVERT:
#4 REBARS FIELD BENT WITH 'L' DIMENSIONS OF 6"X6" SPACED EVENLY ON APPROXIMATELY 8" CENTERS. ONE 6" LEG DRIVEN INTO SIDE OF BOX AND THE OTHER EMBEDDED 6" INTO THE WINGWALL. BARS SHALL HAVE 2" CLEAR SPACING TOP AND BOTTOM. (SAME EACH WINGWALL)

(3) CONNECTION OF SPLASH PAD TO WINGWALLS:
#4 REBARS FIELD BENT WITH 'L' DIMENSIONS OF 12"X8" SPACED EVENLY ON APPROXIMATELY 12" CENTERS. THE 12" LEG EMBEDDED INTO THE SPLASH PAD AND THE 8" LEG EMBEDDED DOWNWARD INTO THE WINGWALL. BARS SHALL BE CENTERED IN THE SPLASH PAD AND THE WINGWALL. WINGWALLS SHALL BE ONE CONTINUOUS POUR FROM CONSTRUCTION JOINT ABOVE FOOTING TO TOP OF THE WALL. THERE SHOULD BE NO CONSTRUCTION JOINT AT PAD ELEVATION.

(4) CONNECTION OF SPLASH PAD TO THE CUT-OFF WALL:
(SEE CUT-OFF WALL DETAIL) THE #4 BAR REINFORCING OF THE CUT-OFF WALL SHALL BE FIELD BENT INTO A 'C' AND 'Z' SHAPES WITH THE DIMENSIONS 3'-4"X8"X6" SPACED EVENLY ON APPROXIMATELY 24" CENTERS. THE 8" LEG ALTERNATES INTO FOOTING LEG AND 6" EMBEDDED INTO SPLASH PAD. THE BARS SHALL BE CENTERED IN THE CUT-OFF WALL.

VARIABLES (UNITS: INCHES)
'#' = NUMBER OF BOXES
'H' = INSIDE BOX HEIGHT + ROOF THICKNESS + HEADER HEIGHT
'W' = INSIDE WIDTH OF BOX
'V' = INSIDE HEIGHT OF BOX
'T' = SIDE WALL THICKNESS

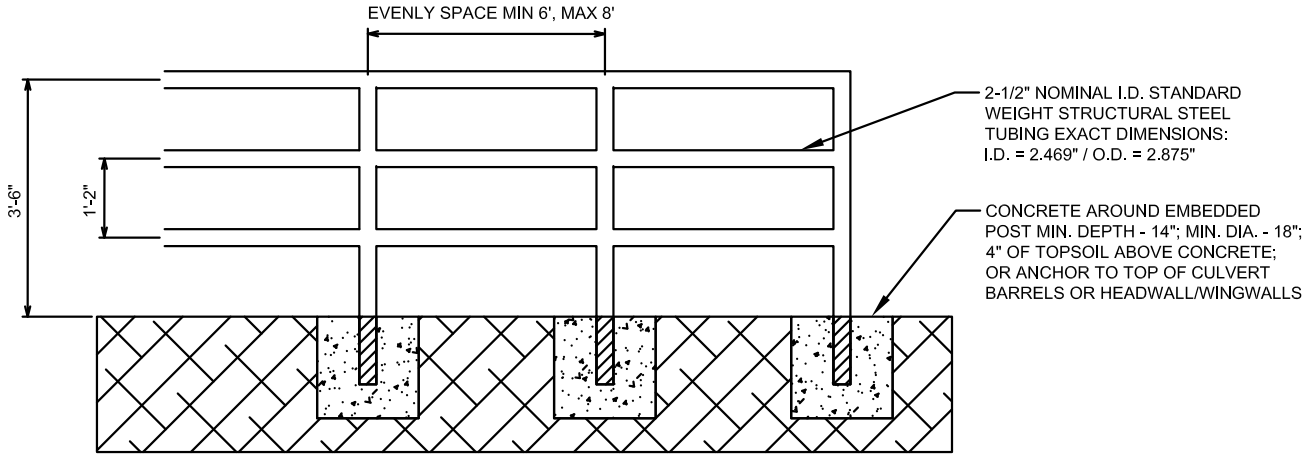
DRAWING NOT TO SCALE 2021

CITY OF MADISON
ENGINEERING DIVISION

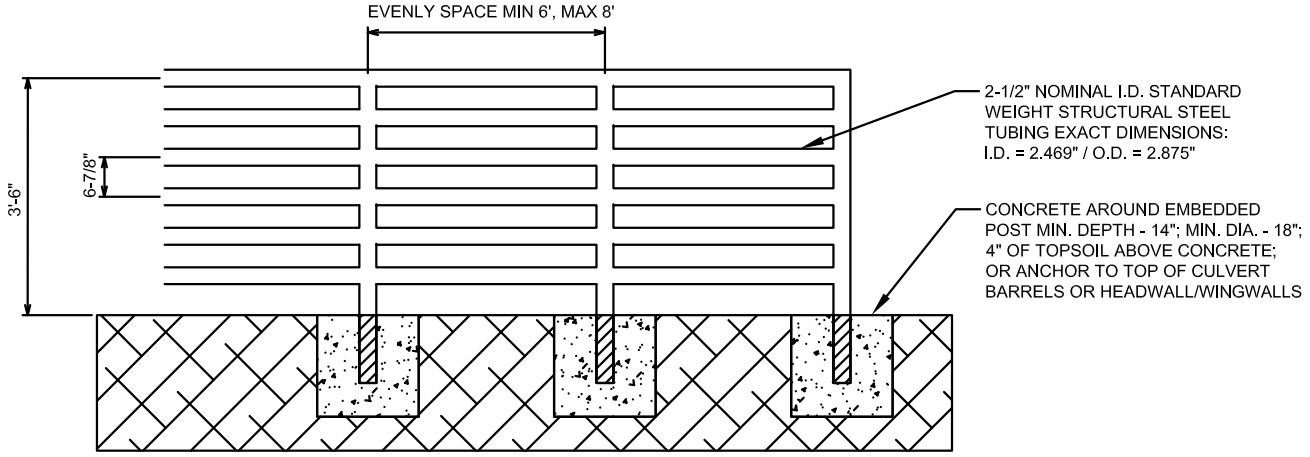
BOX CULVERT WINGWALL

STANDARD DETAIL DRAWING 5.5.1

5.5.1



FOR RAILINGS 10' OR FURTHER FROM EDGE OF PATH/SIDEWALK



FOR RAILINGS LESS THAN 10' FROM EDGE OF PATH/SIDEWALK

GENERAL RAILING NOTES:

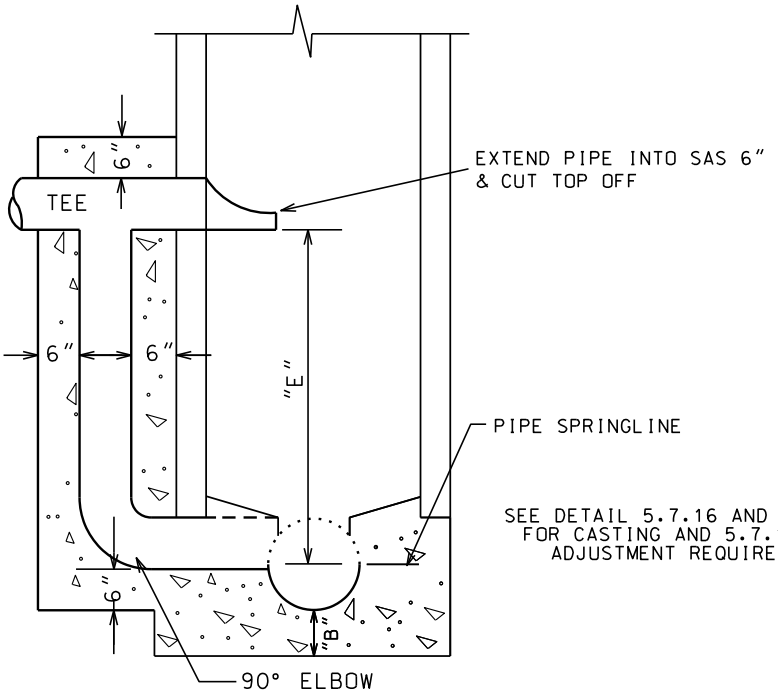
- THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE RAILING TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- ALL PIPES SHALL BE CUT TO FIT AND JOINTS SHALL BE WELDED CONTINUOUSLY AROUND THE PERIMETER TO ENSURE A BURR FREE AND STRUCTURALLY SOUND CONNECTION.
- IF RAILING WILL BE ANCHORED TO THE CULVERT, ANKR-TITE CONCRETE ANCHORS SHALL BE USED. SHOW RAILING BASE PLATES AND CONNECTION ON SHOP DRAWINGS.
- ALL STEEL PIPE RAILING MATERIAL SHALL BE PAINTED WITH A THREE-COAT ZINC RICH EPOXY TREATMENT CONSISTING OF AN INORGANIC ZINC RICH PRIMER, INTERMEDIATE HIGH BUILD EPOXY PAINT COAT, AND PROTECTIVE SHOP COAT OF URETHANE PAINT. PRIOR TO PAINTING, ALL STEEL POSTS AND RAILS SHALL BE GIVEN A NEAR-WHITE BLAST CLEANING. PAINTING AND CLEANING SHALL CONFORM TO SECTION 517 OF THE STATE STANDARD SPECIFICATIONS.
- RAILING SHALL BE PAINTED BLACK (RAL 9005 OR EQUIVALENT).
- IF ON A SLOPE, THE POSTS SHOULD REMAIN VERTICAL AND THE RAILS SLOPED WITH THE GROUND OR WINGWALL.

DRAWING NOT TO SCALE 2021

CITY OF MADISON
ENGINEERING DIVISION

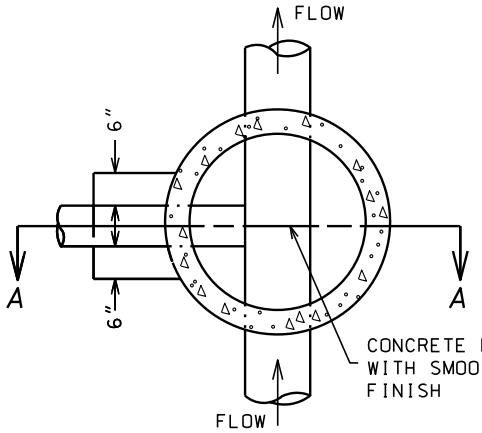
CULVERT WINGALL RAILINGS

STANDARD DETAIL DRAWING 5.5.3

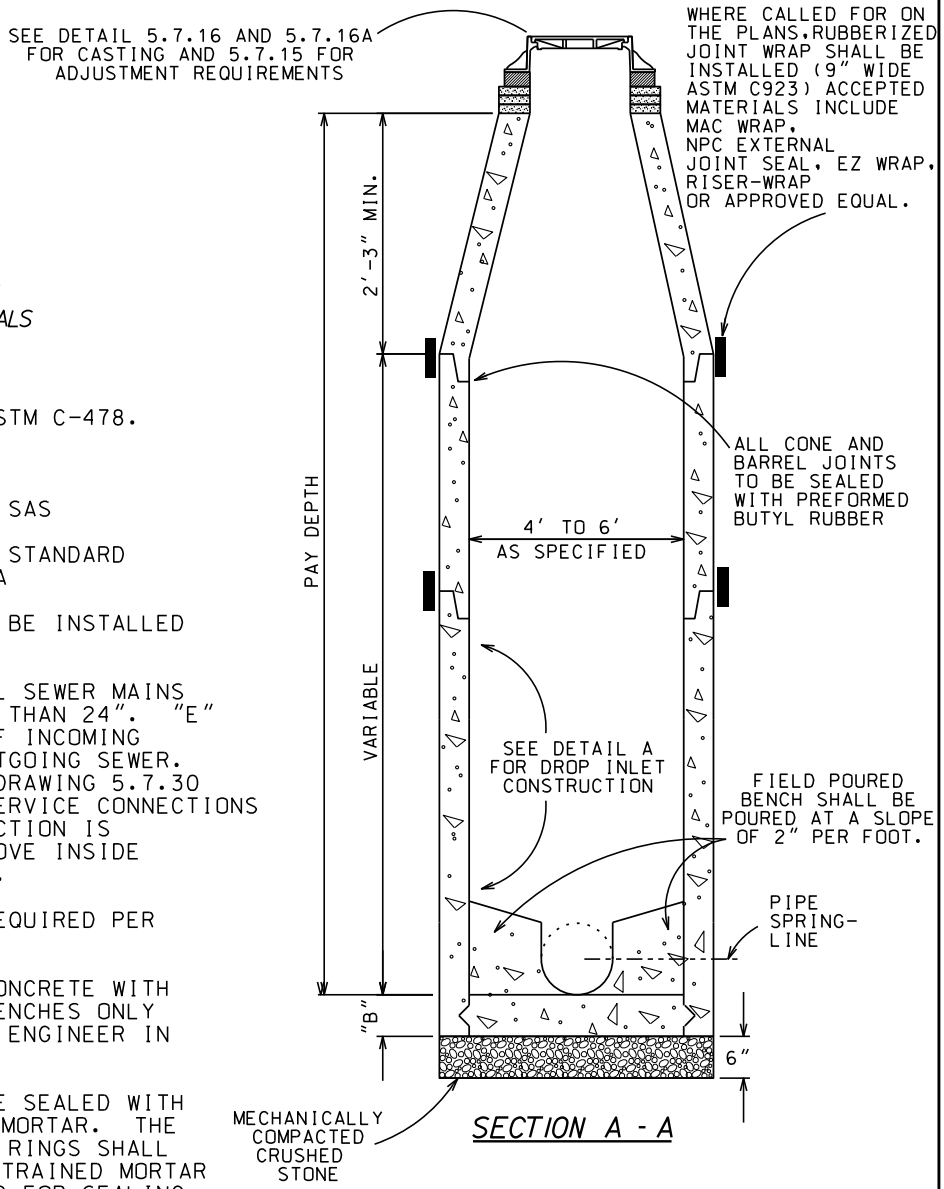


DETAIL A

SHOWING DROP INLET CONSTRUCTION FOR SANITARY SEWER MAINS & LATERALS



TOP VIEW



SECTION A - A

NOTES:

1) PRECAST S.A.S. SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C-478.

2) THICKNESS OF BASE, "B":
   6" MIN. FOR 4' DIAMETER SAS
   8" MIN. FOR 5' AND 6' DIAMETER SAS

3) FOR CASTING DESIGNATION REFER TO STANDARD DETAIL DRAWING 5.7.16 AND 5.7.16A

4) CENTERED (CONCENTRIC) CONE SHALL BE INSTALLED UNLESS OTHERWISE DIRECTED.

5) DROP INLET SHALL BE BUILT FOR ALL SEWER MAINS AND LATERALS WHEN "E" IS GREATER THAN 24". "E" SHOULD BE MEASURED FROM INVERT OF INCOMING PIPE TO THE SPRINGLINE OF THE OUTGOING SEWER. INSIDE DROP PER STANDARD DETAIL DRAWING 5.7.30 MAY BE INSTALLED FOR 4" AND 6" SERVICE CONNECTIONS WHERE OUTSIDE DROP INLET CONSTRUCTION IS INFEASIBLE. ENGINEER SHALL APPROVE INSIDE DROP INLET PRIOR TO INSTALLATION.

6) FLEXIBLE PIPE TO SAS CONNECTOR REQUIRED PER STANDARD DETAIL DRAWING 5.7.31

7) ALL BENCHES TO BE FIELD POURED CONCRETE WITH SMOOTH TROWEL FINISH. PRECAST BENCHES ONLY PERMITTED WITH PRIOR APPROVAL OF ENGINEER IN WRITING.

8) ALL JOINTS BETWEEN RINGS SHALL BE SEALED WITH $\frac{3}{8}$" OF AIR-ENTRAINED TYPE M OR S MORTAR. THE OUTSIDE SURFACE OF THE ADJUSTING RINGS SHALL BE SEALED WITH A $\frac{1}{2}$" THICK AIR-ENTRAINED MORTAR TYPE M OR S SEAL. THE METHOD USED FOR SEALING THE OUTSIDE SURFACE SHALL BE COMPATIBLE WITH THAT USED TO SEAL JOINTS BETWEEN THE RINGS.

9) PRECAST SANITARY SEWER ACCESS STRUCTURES FOR STREET RECONSTRUCTION PROJECTS AND FOR STREET EXCAVATION PERMITS REQUIRE PRECAST SHOP DRAWING APPROVAL FROM CITY ENGINEERING. PRIOR TO BEING FABRICATED BY THE MANUFACTURER NO PRECAST SHOP DRAWINGS ARE REQUIRED FOR NEW CONSTRUCTION IN SUBDIVISION DEVELOPMENTS.NO PRECAST STRUCTURES SHALL BE MANUFACTURED OR DELIVERED TO THE PROJECT SITE WITH STEPS.

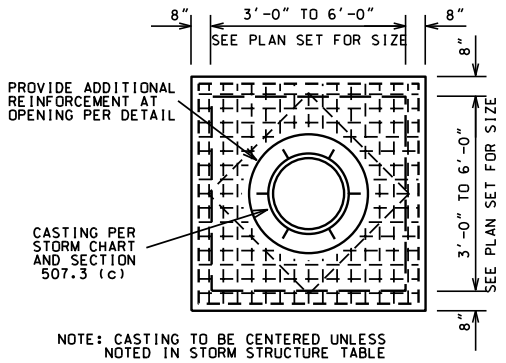
2021

CITY OF MADISON
ENGINEERING DIVISION

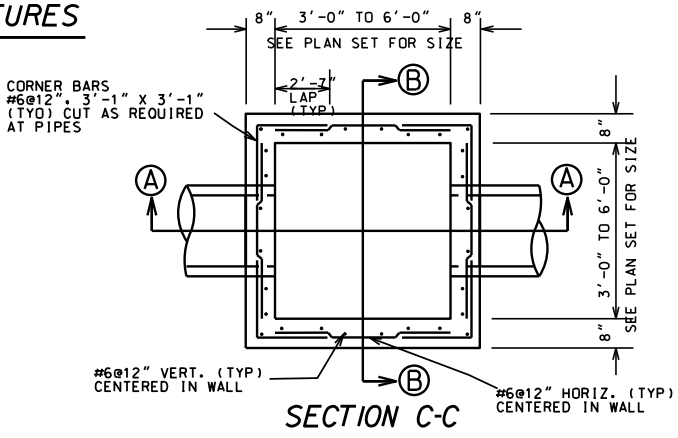
SANITARY SEWER PRECAST SAS

STANDARD DETAIL DRAWING 5.7.2

SEWER ACCESS STRUCTURES

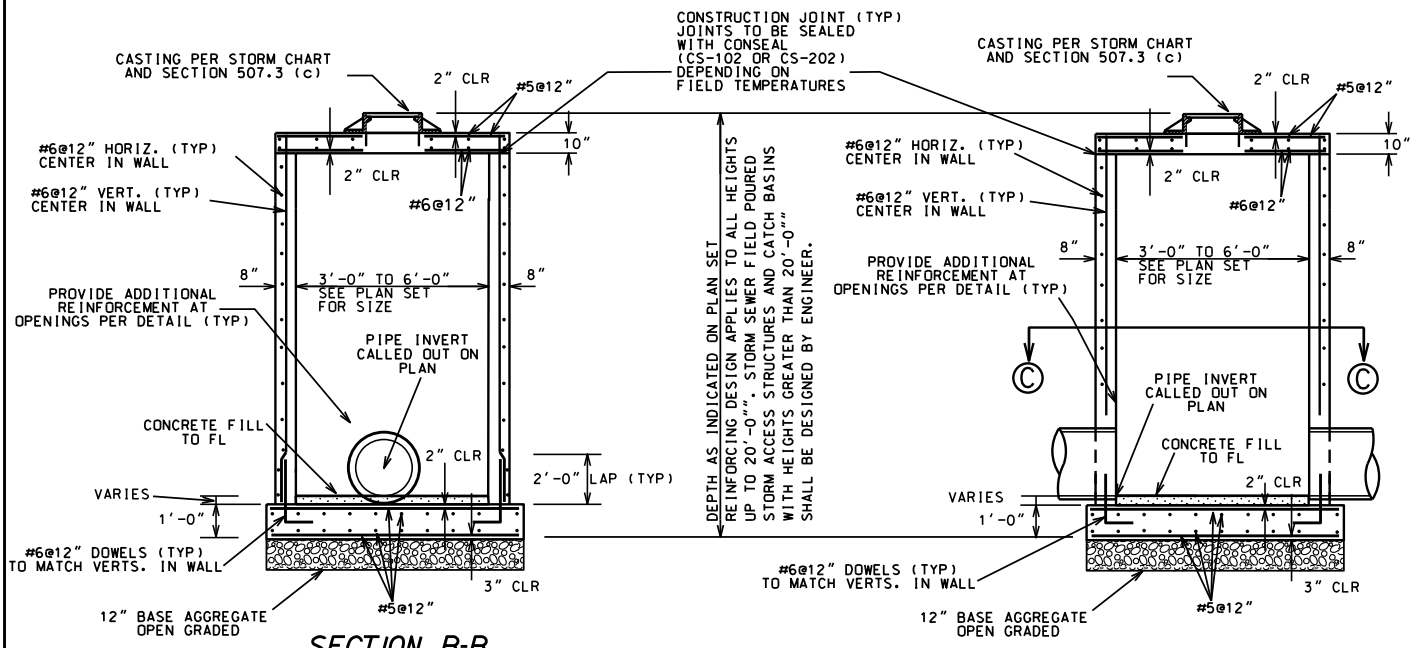


TOP VIEW



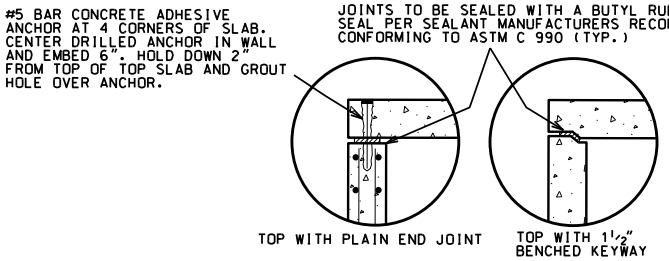
SECTION C-C

NOTE: REINFORCING SHOWN IN SECTION C-C IS TYPICAL WALL REINFORCING. CUT REINFORCING AS REQUIRED AROUND PIPES AND PROVIDE ADDITIONAL REINFORCING AT OPENINGS PER DETAIL.

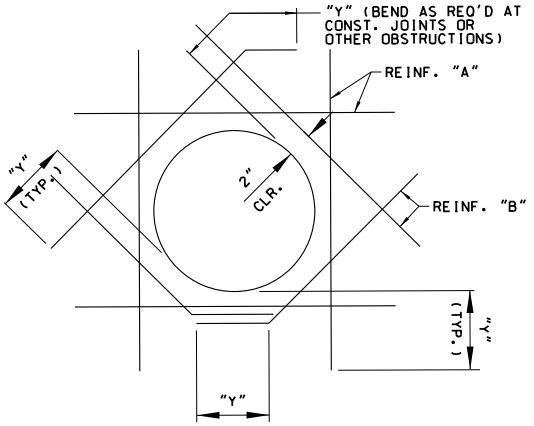


SECTION B-B

SECTION A-A



PRECAST TOP SLAB JOINT DETAIL



NOTES

1. MOVE REINF. MAX. OF 2" TO CLEAR OPENING TO AVOID CUTTING REINF. CUT REMAINING BARS THAT PASS THROUGH OPENING.

2. WHERE REINF. MUST BE CUT, ADD REINF. "A" AT LEAST EQUAL IN AREA TO THAT WHICH WAS CUT AND EXTEND BEYOND OPENING DISTANCE "Y".

3. DIAGONAL BARS "B" TO BE PLACED:
   A. AT EACH FACE OF WALL WHERE TWO LAYERS OF REINF. ARE PROVIDED.
   B. AT TOP & BOTTOM OF ALL SLABS.

4. UNLESS OTHERWISE NOTED, SIZE OF REINF. "B" SHALL BE THE SIZE OF THE LARGEST REINF. BAR CUT.

5. Y = CLASS B LAP (#4 BAR = 1'-6") (#5 BAR = 1'-10")

6. THIS DETAIL IS TO BE USED WHEN NO OTHER DETAIL IS SPECIFIED.

ADDITIONAL REINFORCEMENT AT CONCRETE OPENINGS

DESIGN DATA:
CONCRETE MASONRY: f'c= 4,000 PSI
STEEL REINFORCING: fY=60,000 PSI

STRUCTURE IS DESIGNED FOR HS20 LIVE LOAD.

STRUCTURE IS NOT DESIGNED FOR MORE THAN 2'-0" OF FILL ON TOP OF TOP SLAB.

GENERAL NOTES:
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL REINFORCING SHALL BE EPOXY COATED.

CONTRACTOR MAY CHOOSE TO PRECAST TOP SLAB AND LIFT SLAB ONTO STRUCTURE. IF TOP SLAB IS NOT CAST-IN-PLACE, USE ONE OF THE ALTERNATE SLAB JOIN DETAILS SHOWN IN "PRECAST TOP SLAB JOINT DETAIL".

PROVIDE ADDITIONAL REINFORCEMENT AT ALL OPENINGS PER "ADDITIONAL REINFORCEMENT AT CONCRETE OPENINGS" DETAIL.

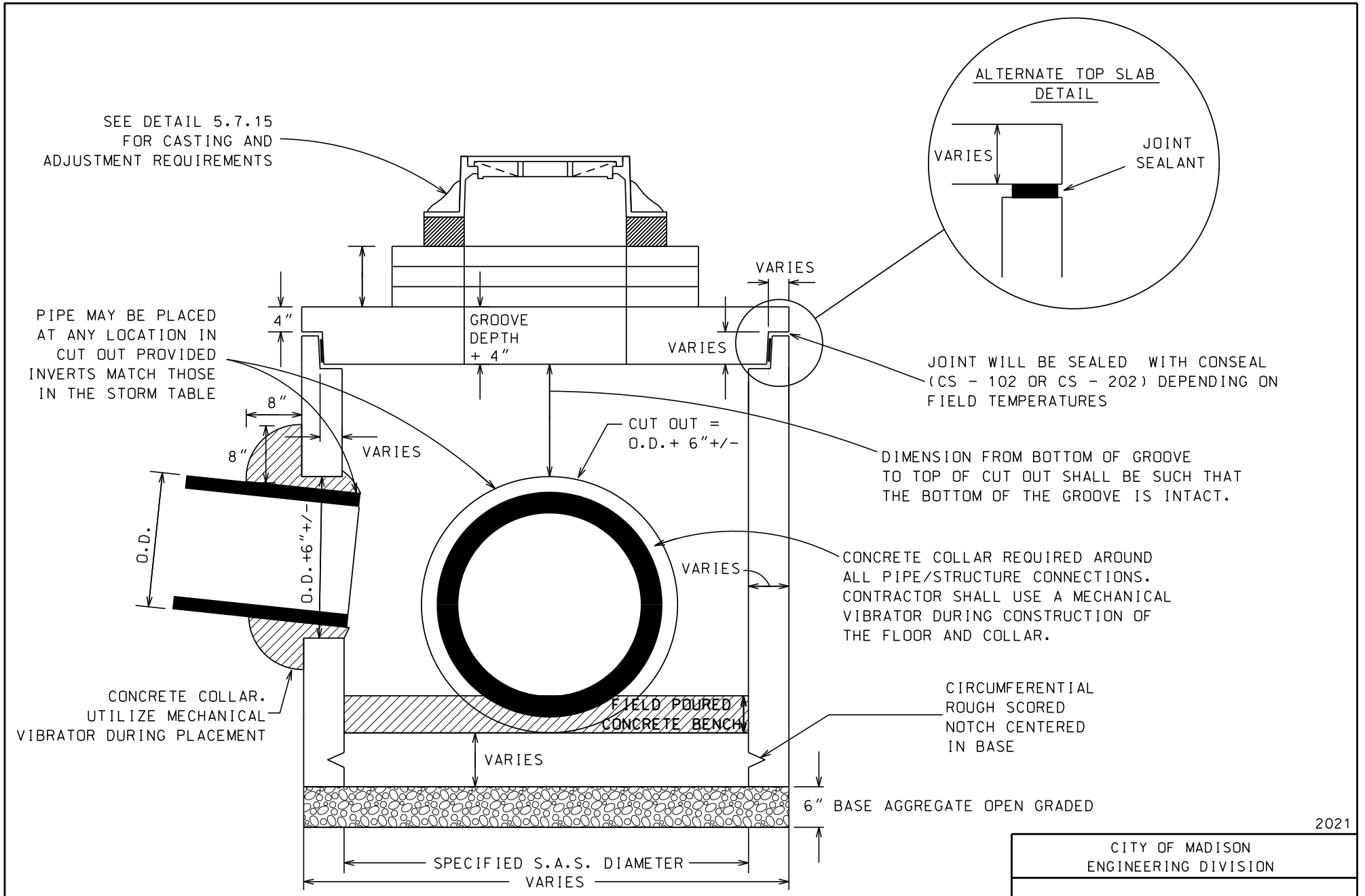
BACKFILL STRUCTURE WITH SELECT FILL SAND (BID ITEM 20208).

2021

CITY OF MADISON
ENGINEERING DIVISION

STORM SEWER FIELD POURED SAS

STANDARD DETAIL DRAWING 5.7.3



5.7.5

2021

CITY OF MADISON
ENGINEERING DIVISION

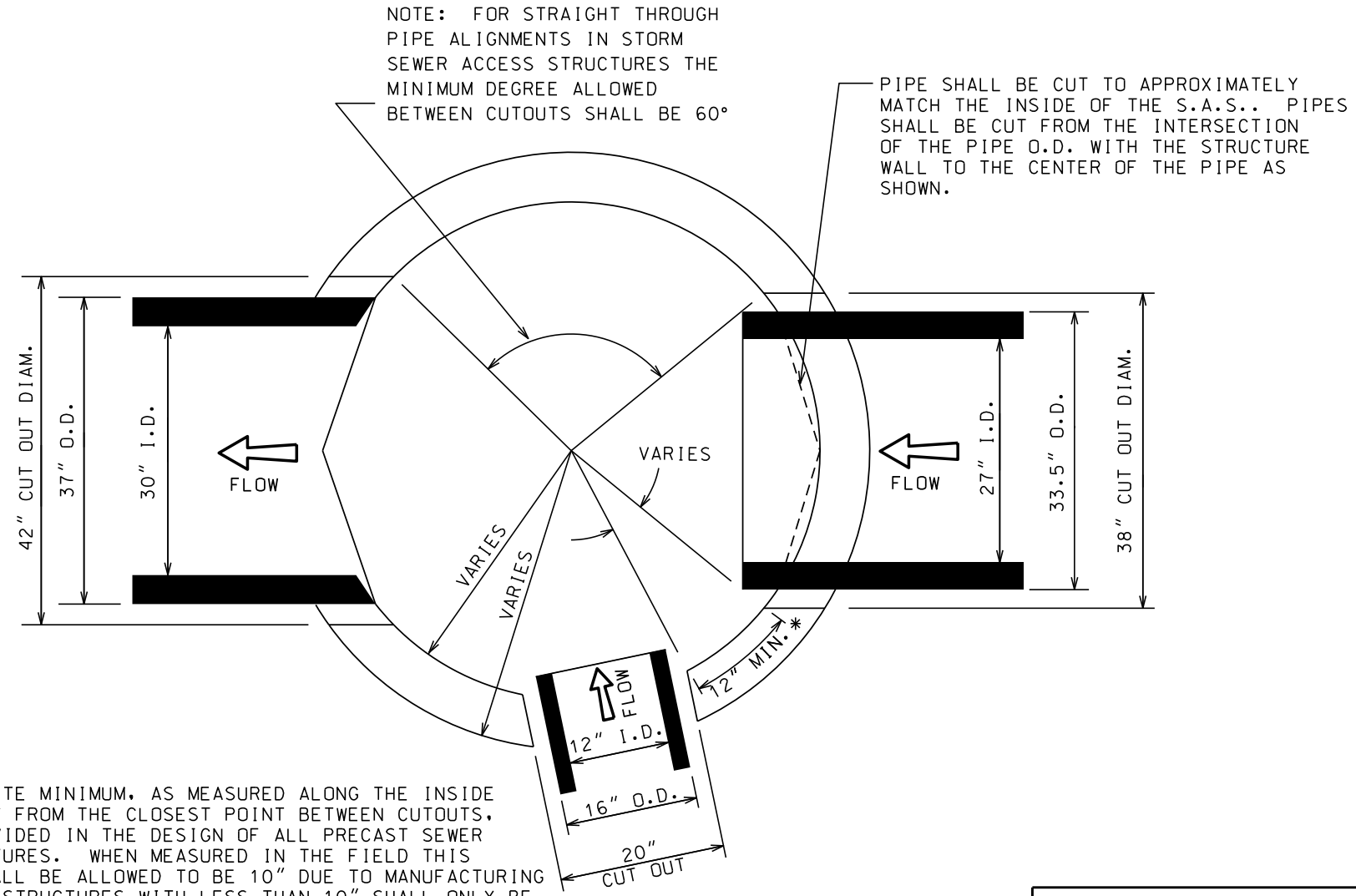
STORM SEWER PRECAST SAS (THROUGH SECTION VIEW)

STANDARD DETAIL DRAWING 5.7.5

DESIGN DATA:
CONCRETE MASONRY: f'c= 4,000 PSI
STEEL REINFORCING: Fy= 60,000 PSI

GENERAL NOTES:
1) WALL, TOP SLAB, AND BASE SLAB THICKNESS AND REINFORCING SHALL BE DESIGNED BY PRECAST STRUCTURES MANUFACTURER.
2) NO PRECAST STRUCTURES SHALL BE MANUFACTURED OR DELIVERED TO THE PROJECT SITE WITH STEPS.

NOTES:
1) ALL STORM SEWER ACCESS STRUCTURES (S.A.S.) SHALL BE CONSTRUCTED IN COMPLIANCE WITH ASTM C478.
2) NO PRECAST STRUCTURES SHALL BE MANUFACTURED OR DELIVERED TO THE SITE WITH STEPS.



* 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.

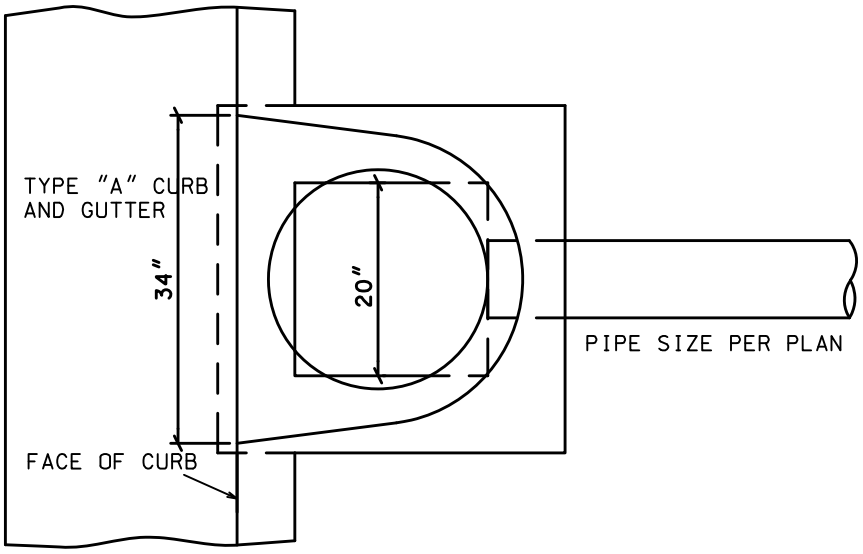
2021

CITY OF MADISON
ENGINEERING DIVISION

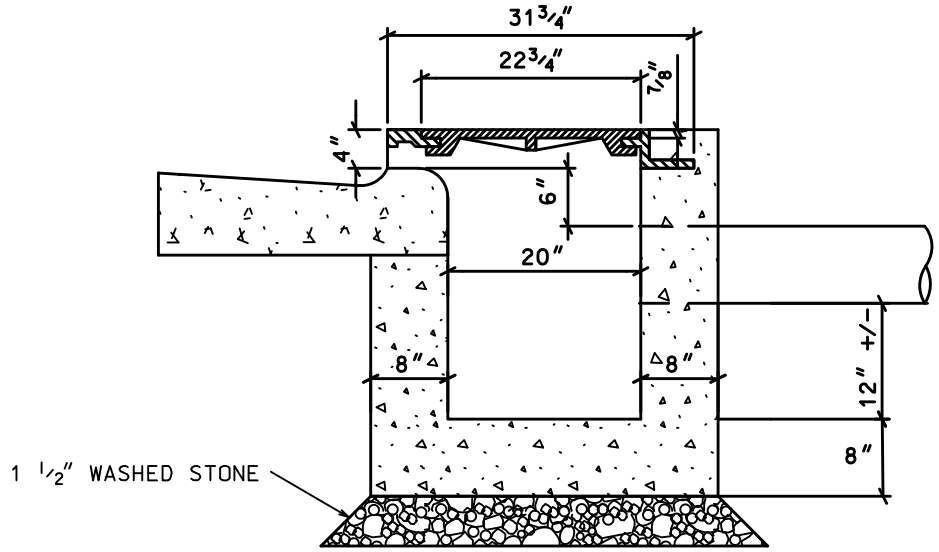
STORM SEWER PRECAST SAS (TOP VIEW)

STANDARD DETAIL DRAWING 5.7.6

5.7.6



TOP VIEW



SIDE VIEW

NOTES:

1) TYPICAL LOCATION FOR INCOMING PIPE SHOWN. ALTERNATE INCOMING LOCATIONS FROM EITHER SIDE

2) CURB OUTLET STRUCTURE FRAME AND LID ARE NEENAH CASTING R-3331

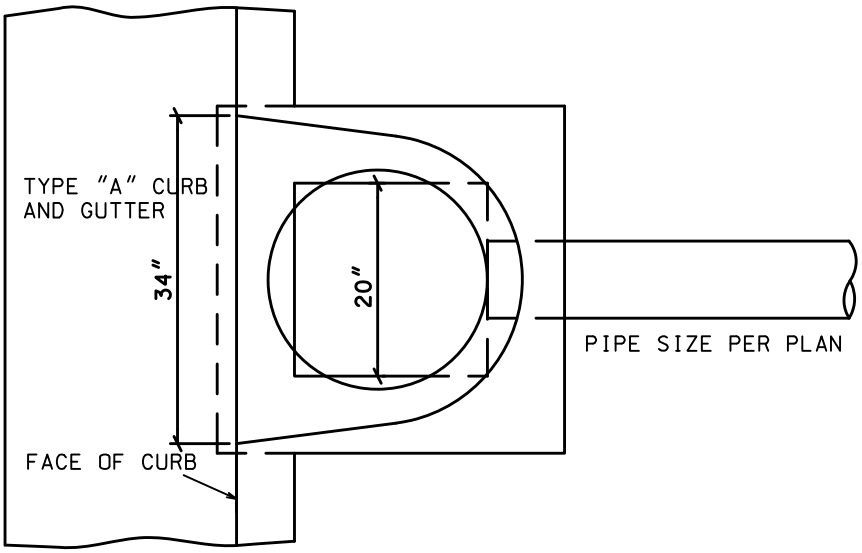
3) NO DEPTH RESTRICTIONS IF STRUCTURE HAS A FLOOR.

2021

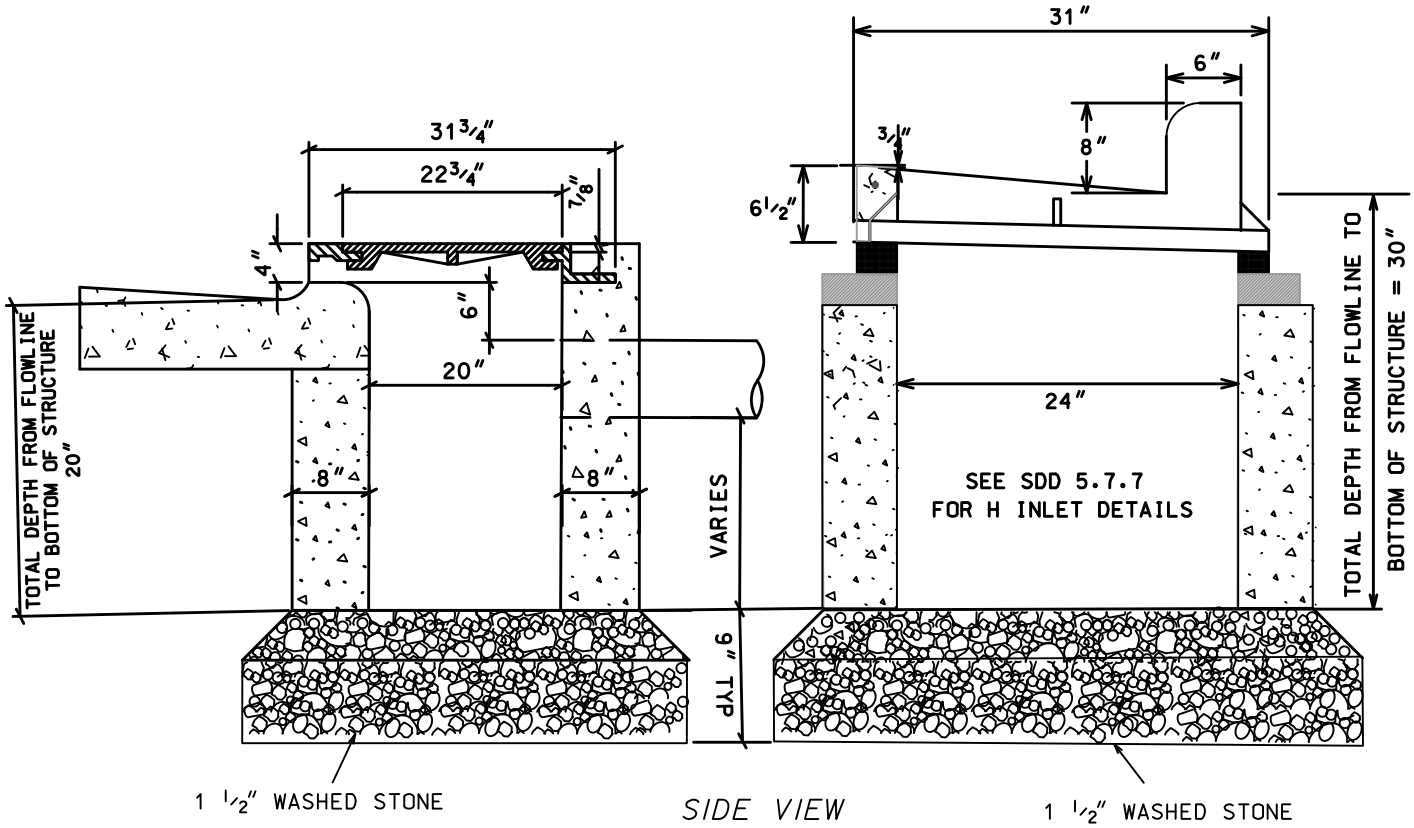
CITY OF MADISON
ENGINEERING DIVISION

CURB OUTLET STRUCTURE SOLID FLOOR

STANDARD DETAIL DRAWING 5.7.13



TOP VIEW



SIDE VIEW

NOTES:

1) TYPICAL LOCATION FOR INCOMING PIPE SHOWN. ALTERNATE INCOMING LOCATIONS FROM EITHER SIDE

2) CURB OUTLET STRUCTURE FRAME AND LID ARE NEENAH CASTING R-3331

3) CURB OUTLETS MUST NOT BE DEEPER THAN THEY ARE WIDE, UNLESS THEY HAVE A SOLID FLOOR. IF DEPTH EXCEEDS WIDTH THEY WILL BE CLASSIFIED AS A CLASS V INJECTION WELL AND SUBJECT TO REVIEW / APPROVAL / NOTIFICATION REQUIREMENTS OF WDNR.

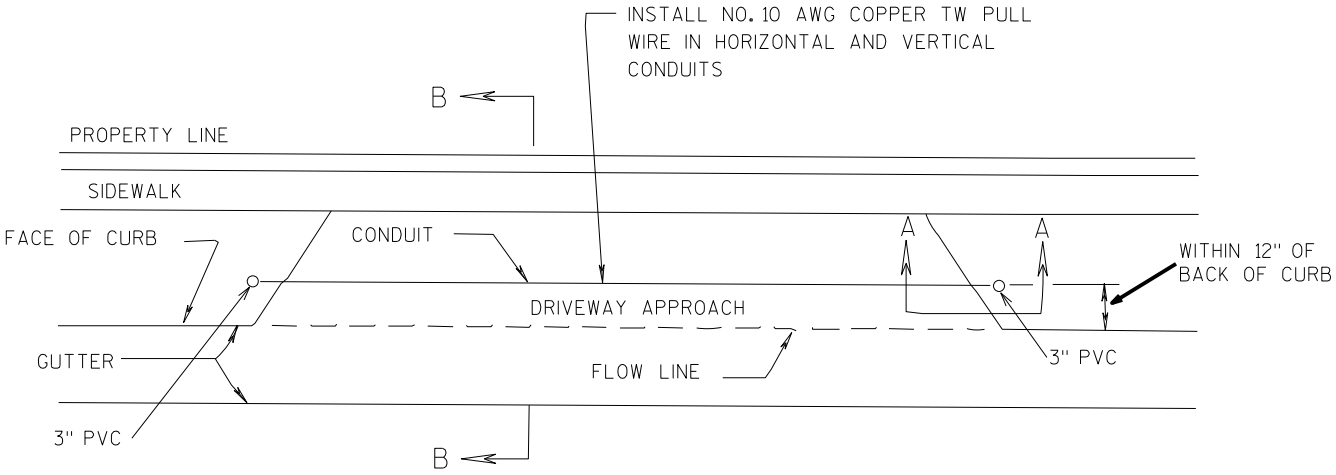
2021

CITY OF MADISON
ENGINEERING DIVISION

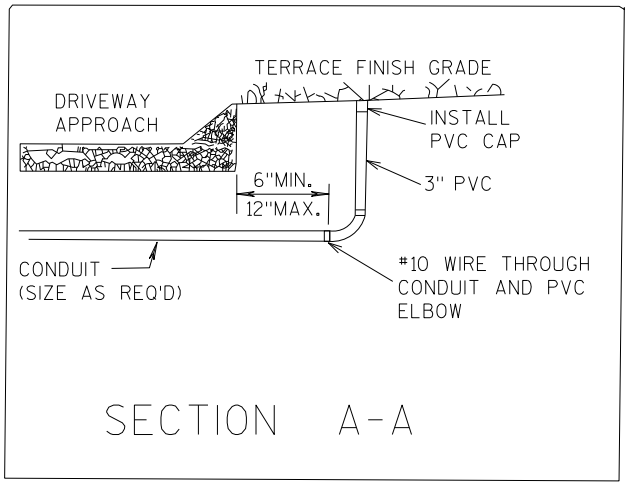
CURB OUTLET STRUCTURE NO FLOOR

STANDARD DETAIL DRAWING 5.7.13A

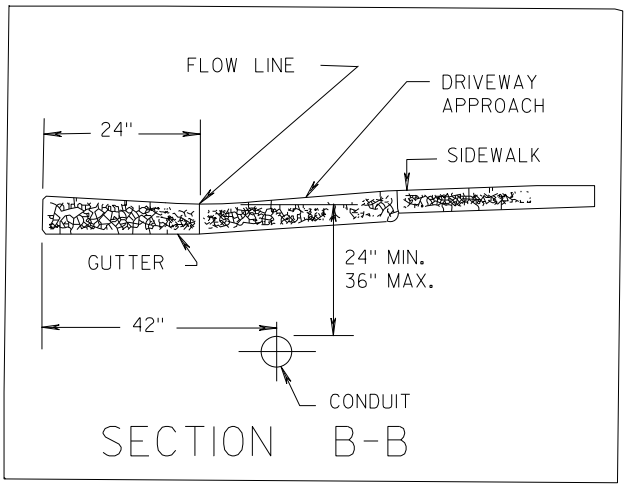
CONDUIT PLACEMENT DETAILS FOR COMMERCIAL DRIVE APPROACHES



PLAN VIEW



SECTION A-A



SECTION B-B

BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING SHOP, ELECTRICAL SECTION, (608-266-4767) TO ARRANGE FOR INSPECTION OF THE DUCT PLACEMENT.

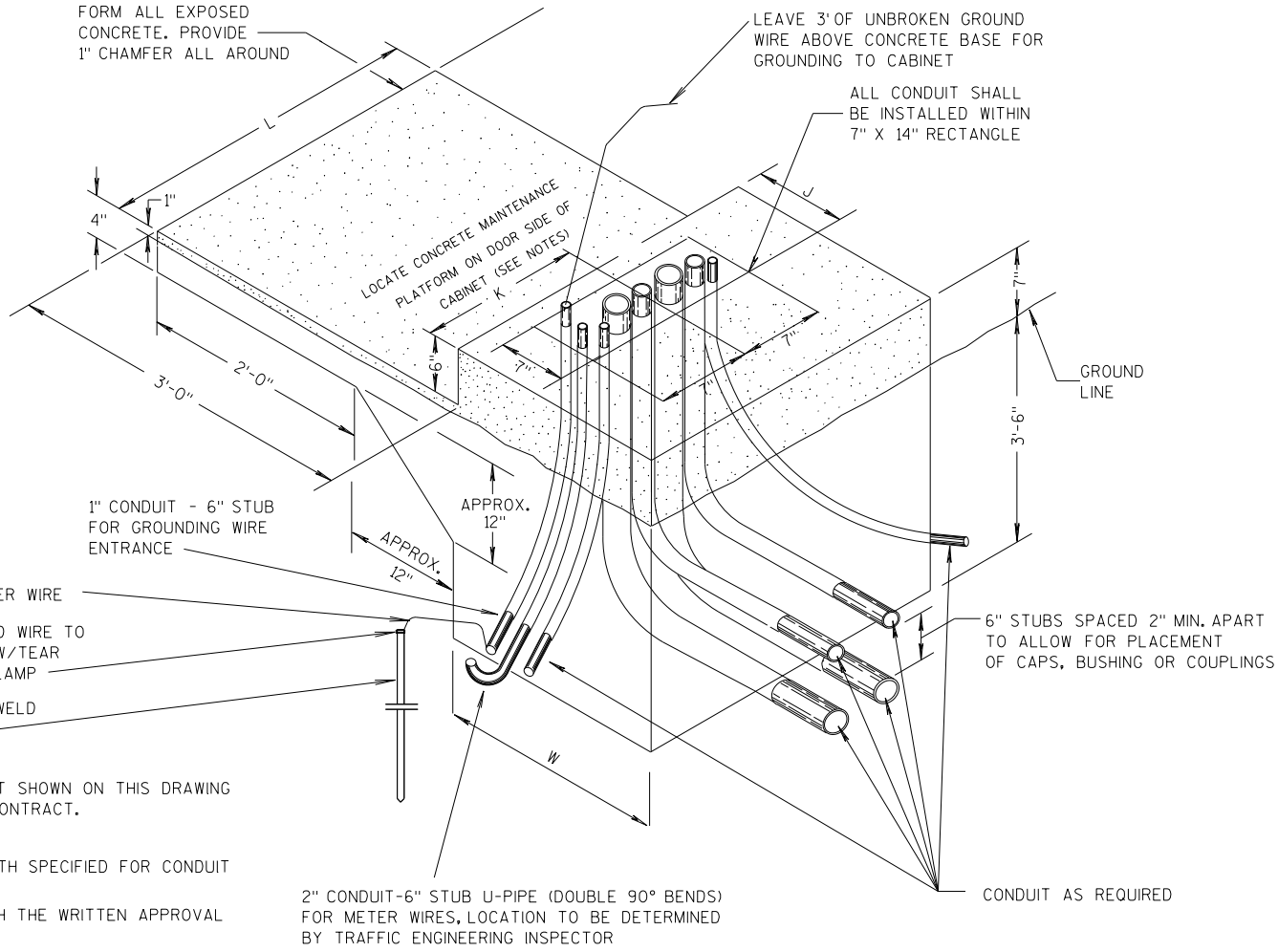
2021

CITY OF MADISON
TRAFFIC ENGINEERING DIVISION

CONDUIT PLACEMENT DETAILS FOR COMMERCIAL DRIVE APPROACH

STANDARD DETAIL DRAWING 6.09

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	L	W	J	K	
TYPE P	48"	30"	16"	24"	1.549
TYPE P MODIFIED	-	-	-	-	-
TYPE OTHER	-				-



GENERAL NOTES

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

ALL CONDUIT SHALL BE PVC, SCHEDULE 40

DEPTH OF CONDUIT EXITING THE BASE SHALL MATCH THE DEPTH SPECIFIED FOR CONDUIT INSTALLATION.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

MAINTENANCE PLATFORM SHALL NOT BE INSTALLED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MINIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUITS SHALL EXIT THE BASE IN THE DIRECTION OF THE STRUCTURE IT IS TERMINATING INTO.

MAINTENANCE PLATFORM SIZE MAY VARY ON ACCOUNT OF CONDITIONS. VERIFY THE MAINTENANCE PLATFORM SIZE WITH ENGINEER PRIOR TO POURING BASE.

CONTACT TE INSPECTOR PRIOR TO GROUND ROD BURIAL

CONCRETE CONTROL CABINET BASES

TYPE P

(ISOMETRIC VIEW)

2021

CITY OF MADISON
TRAFFIC ENGINEERING DIVISION

TYPE "P" CONTROLLER BASE DETAIL

STANDARD DETAIL DRAWING 6.10