CITY OF SHREVEPORT, LOUISIANA

STANDARD PLANS

For

INFRASTRUCTURE IMPROVEMENTS

2015 EDITION

DEPARTMENT OF ENGINEERING
AND ENVIRONMENTAL SERVICES
OFFICE OF THE CITY ENGINEER

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STANDARD PLAN

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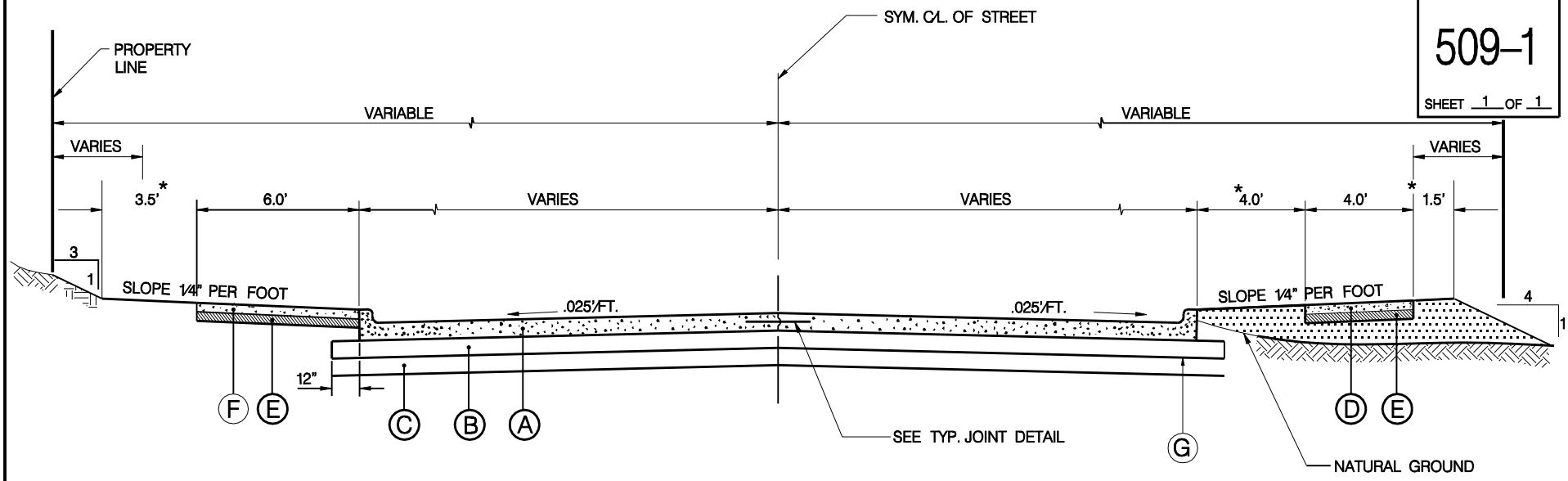


*VARIABLE BUT GENERALLY CORRECT

TYPICAL SECTION

NOT TO SCALE

LEGEND

Ⓐ 8" THICK PORTLAND CEMENT CONCRETE PAVEMENT
T= THICKENESS OF PAVEMENT

Ⓑ CRUSHED STONE BASE – THICKENESS TO BE DETERMINED FROM SOILS REPORT, MIN. 12".

Ⓒ SCARIFIED TO A DEPTH OF 12" AND COMPACTED TO 90% DENSITY.*

Ⓓ 4" THICK PORTLAND CEMENT CONCRETE SIDEWALK IF REQUIRED.

Ⓔ 4" THICK SANDBASE

Ⓕ 6' CONCRETE SIDEWALK ADJACENT TO PAVEMENT (4" THICK), IF REQUIRED.

Ⓖ GEOTEXTILE FABRIC (AMOCO 2002 OR EQUAL).

* NOTE : SOIL ANALYSIS SHALL BE PERFORMED WITH MAXIMUM ALLOWABLE P.I. OF 15. EXCESS OF 15 P.I. SHALL BE LIME TREATED TO A DEPTH OF 8" TO BRING P.I. TO ALLOWABLE LIMITS LIME TREATMENT SHALL BE A MIN. OF 3.0% BY VOLUME TO BE VERIFIED BY SOILS TEST.

CITY OF SHREVEPORT

TYPICAL CONCRETE PAVING SECTION DETAIL

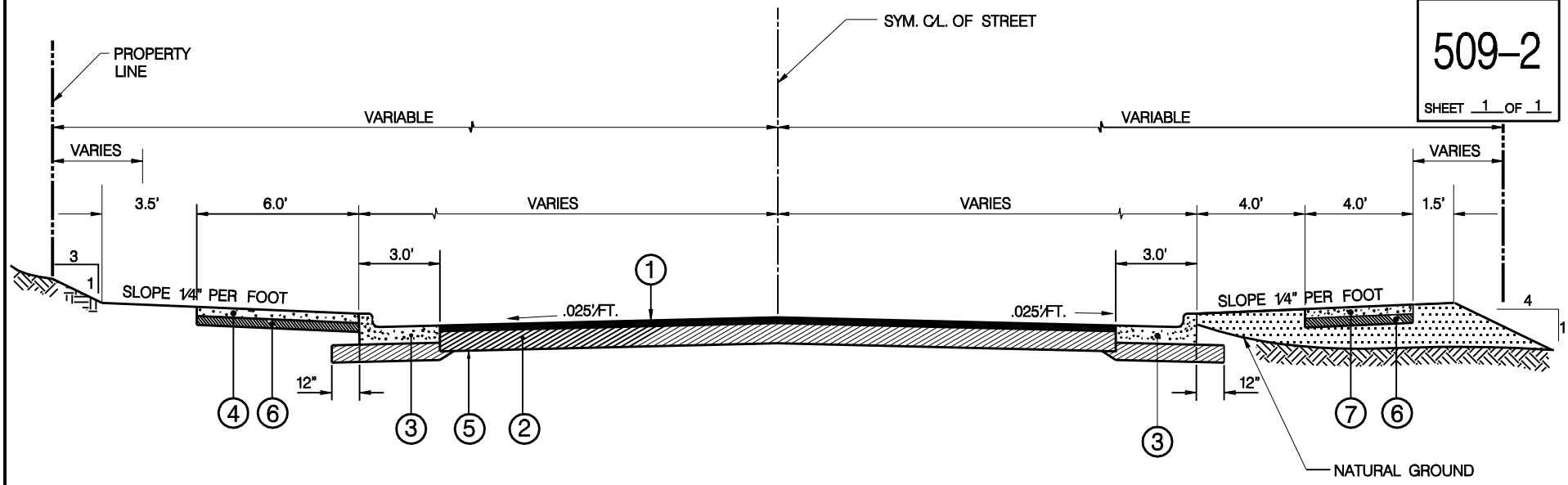
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

509–2

SHEET 1 OF 1



*VARIABLE BUT GENERALLY CORRECT

TYPICAL SECTION

NOT TO SCALE

LEGEND

1. 2.5" ASPHALTIC CONCRETE (TYPE 1)
2. 8" CRUSHED AGGREGATE BASE
3. 3' CONCRETE CURB AND GUTTER
4. 6' CONCRETE SIDEWALK AJACENT TO PAVEMENT (4" THICK) IF REQUIRED.
5. FABRIC MATERIAL AMACO 2002 OR EQUIVALANT (EXTEND FULL WIDTH OF BASE)
6. 4" THICK SAND BASE
7. 4" PORTLAND CEMENT CONCRETE SIDEWALK IF REQUIRED.
8. SCARIFIED TO A DEPTH OF 12" AND COMPACTED TO 90% DENSITY.*

* NOTE : SOIL ANALYSIS SHALL BE PERFORMED WITH MAXIMUM ALLOWABLE P.I. OF 15. EXCESS OF 15 P.I. SHALL BE LIME TREATED TO A DEPTH OF 8" TO BRING P.I. TO ALLOWABLE LIMITS LIME TREATMENT SHALL BE A MIN. OF 3.0% BY VOLUME TO BE VERIFIED BY SOILS TEST.

CITY OF SHREVEPORT

TYPICAL ASPHALT PAVING SECTION DETAIL

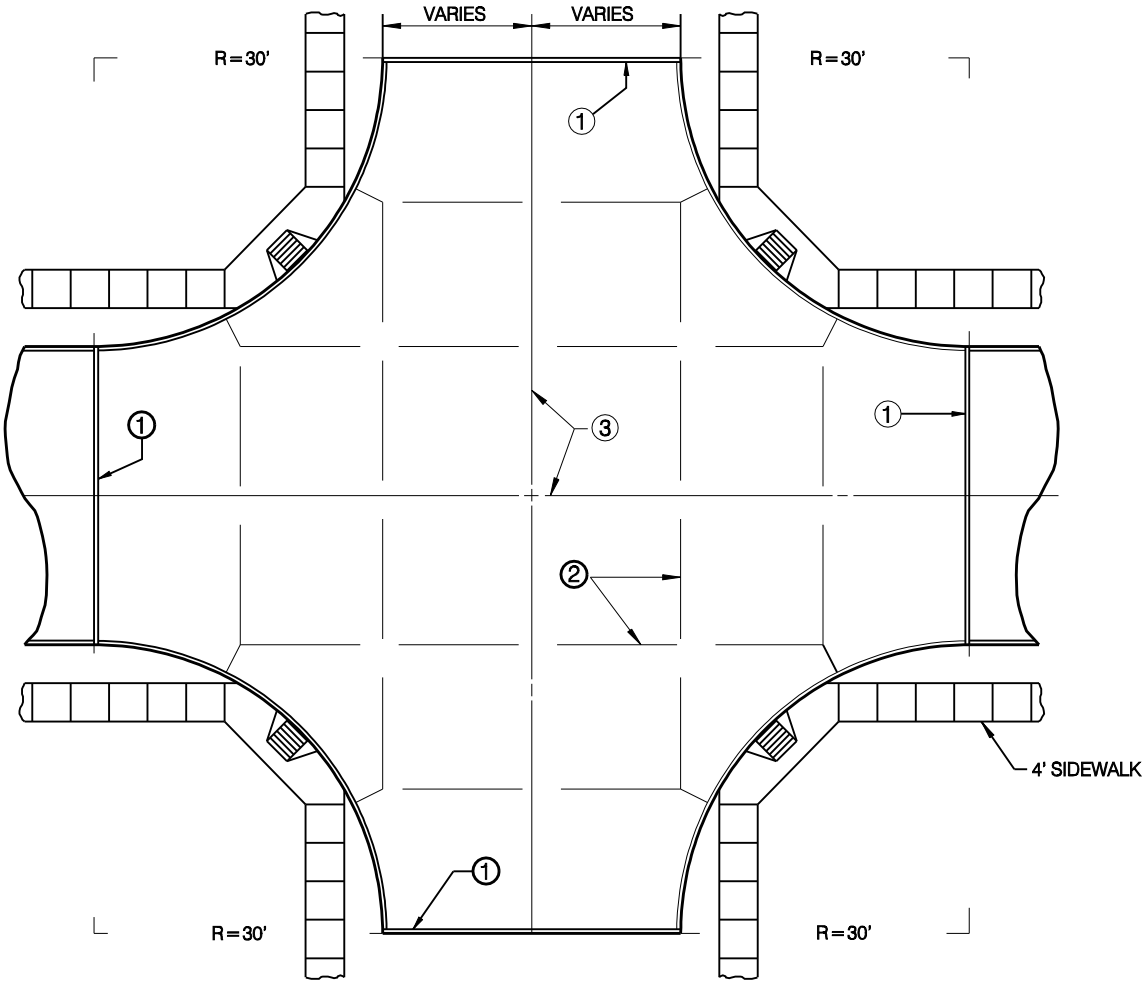
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

509–3

SHEET 1 OF 1



PLAN OF INTERSECTION

NOT TO SCALE

① EXPANSION JOINTS OR THICKENED EDGE, AS MAY BE NOTED ON THE PLANS OR REQUIRED BY THE PROJECT MANAGER.

② TRAVERSE CONSTRUCTION JOINT

③ LONGITUDINAL JOINT

* FOR TYPICAL JOINT DETAIL SEE SHEET 509–4 TO 509–9.

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL CONCRETE PAVING INTERSECTION DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED:

STANDARD PLAN

509–4

SHEET 1 OF 6

GENERAL NOTES

1. PAVEMENT EDGES SHALL BE SLIGHTLY ROUNDED (1/4" APPROX.)

2. UNLESS OTHERWISE SPECIFIED, REASONABLE TOLERANCES TO ALL DIMENSIONS WILL BE ALLOWED.

3. T = THICKNESS OF PAVEMENT.

4. ALL JOINTS TO BE USED WHERE SHOWN ON THESE DETAILS OR AS SHOWN ELSEWHERE IN THE PLANS OR AS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. ALL JOINTS SHALL BE SAND BLASTED. ALL JOINTS REQUIRING SAWING SHALL BE SAWED WITHIN 48 HOURS OF PAVEMENT PLACEMENT.

5. ON TYPE E JOINTS, SPOT WELD ALTERNATE ENDS OF DOWEL BARS TO DOWEL BASKET.

6. TYPE E JOINTS SHALL BE SEALED WITH SILICONE JOINT SEALER, A NEOPRENE JOINT SEALER OR APPROVED EQUAL WHICH HAS A NOMINAL WIDTH OF 2" BEFORE COMPRESSION AND OF A CONFIGURATION AS APPROVED BY THE CITY ENGINEER MAY BE USED.

7. TYPE L JOINTS SHALL BE SAWED, SAND BLASTED AND SEALED WITH SILICONE JOINT SEALER AS SHOWN IN DETAIL "B". AN APPROVED PREFORMED JOINT FILLER NOT REQUIRING SEALING MAY BE USED.

8. TYPE T JOINTS SHALL BE SAWED, SAND BLASTED, CLEANED AND SEALED AS SHOWN IN DETAIL "A". JOINTS SHALL BE SEALED WITH SILICONE. A NEOPRENE JOINT SEALER WHICH HAS A NOMINAL WIDTH OF 13/16" BEFORE COMPRESSION AND OF CONFIGURATION AS APPROVED BY THE ENGINEER MAY BE USED. BALANCE OF FIBERBOARD MAY REMAIN OR BE SAWED AT THE OPTION OF THE CONTRACTOR.

9. WHERE AN APPROVED MECHANICAL PLACEMENT IS NOT UTILIZED. DOWEL BARS AND TIES BARS SHALL BE SUPPORTED IN PLACE BY SUPPORTS SIMILAR TO THE ONES SHOWN OR APPROVED EQUALS. WHEN APPROVED DOWEL BAR ASSEMBLIES ARE USED, SPACER RODS THAT SPAN ACROSS THE JOINT SHALL BE CUT IN THE FIELD AFTER STAKING ASSEMBLY IN PLACE.

10. WHERE SPLIT SLAB CONSTRUCTION IS REQUIRED, TYPE T AND E JOINTS MAY BE SEALED WITH AN APPROVED POURABLE JOINT SEALER WITH BACKING MATERIAL. ALL JOINTS MUST BE SAND BLASTED.

11. ALL LOAD TRANSFER DOWEL BARS SHALL BE SAW CUT AND COATED WITH PLASTIC OR PAINTED AND GREASED.

12. DIAMETER OF LOAD TRANSFER DOWEL BARS SHALL BE T/8. (EXAMPLE 10" THICK PAVEMENT = 10"/8 = 1 1/4" DIA. BAR.)

CITY OF SHREVEPORT

TYPICAL JOINT DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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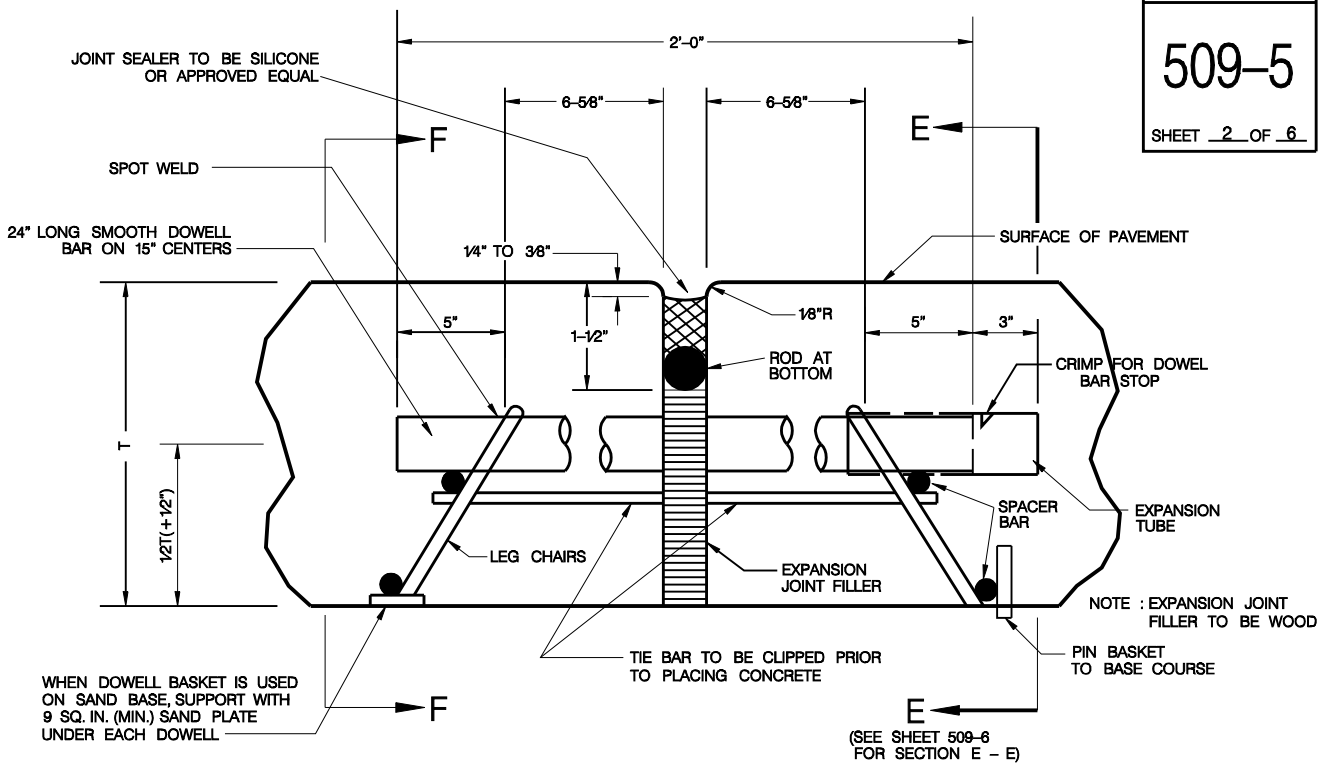
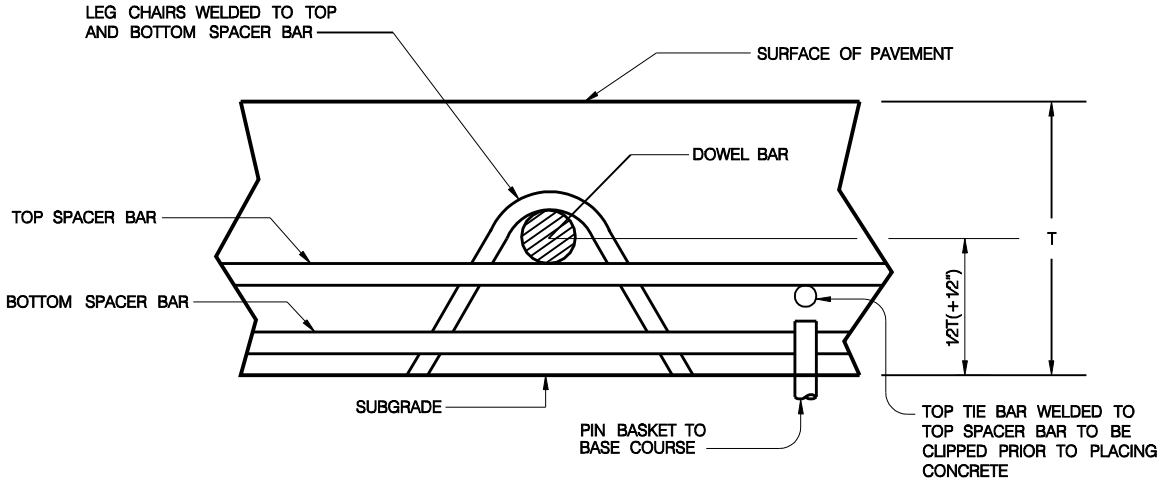
STANDARD PLAN

509–5

SHEET 2 OF 6



TRANSVERSE EXPANSION JOINT
(TYPE E)



SECTION F – F

CITY OF SHREVEPORT

TRANSVERSE EXPANSION JOINT DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
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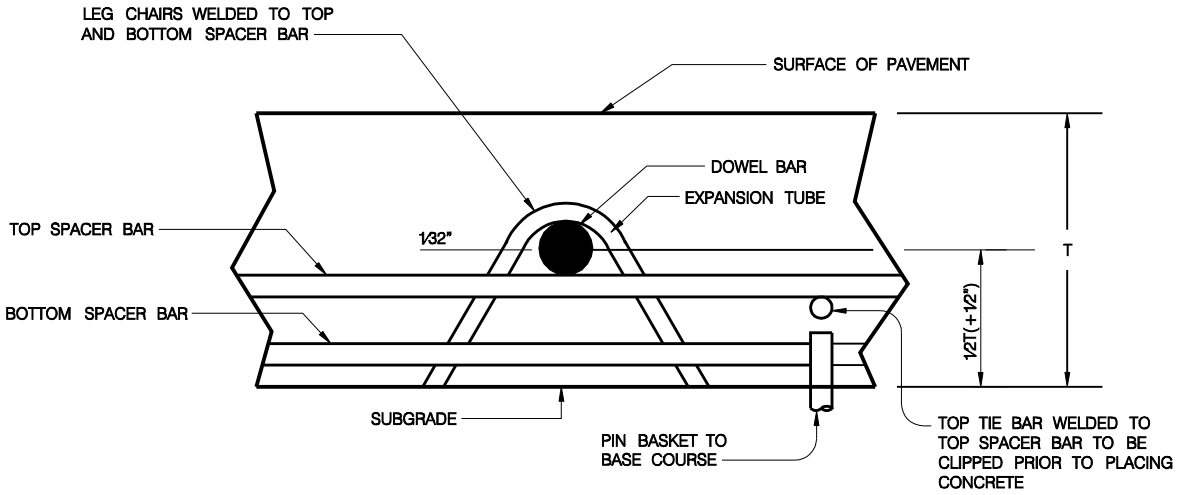
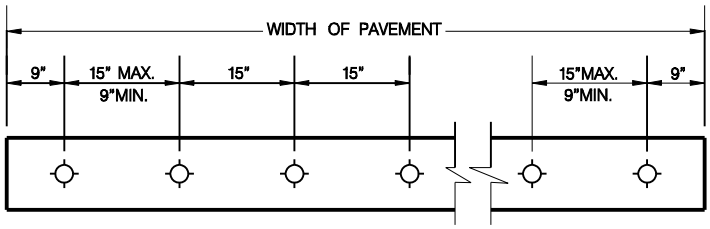
STANDARD PLAN

509–6

SHEET 3 OF 6



SECTION E – E



DOWEL BAR SPACING FOR TRANSVERSE JOINTS

CITY OF SHREVEPORT

TRANSVERSE EXPANSION JOINT DETAIL

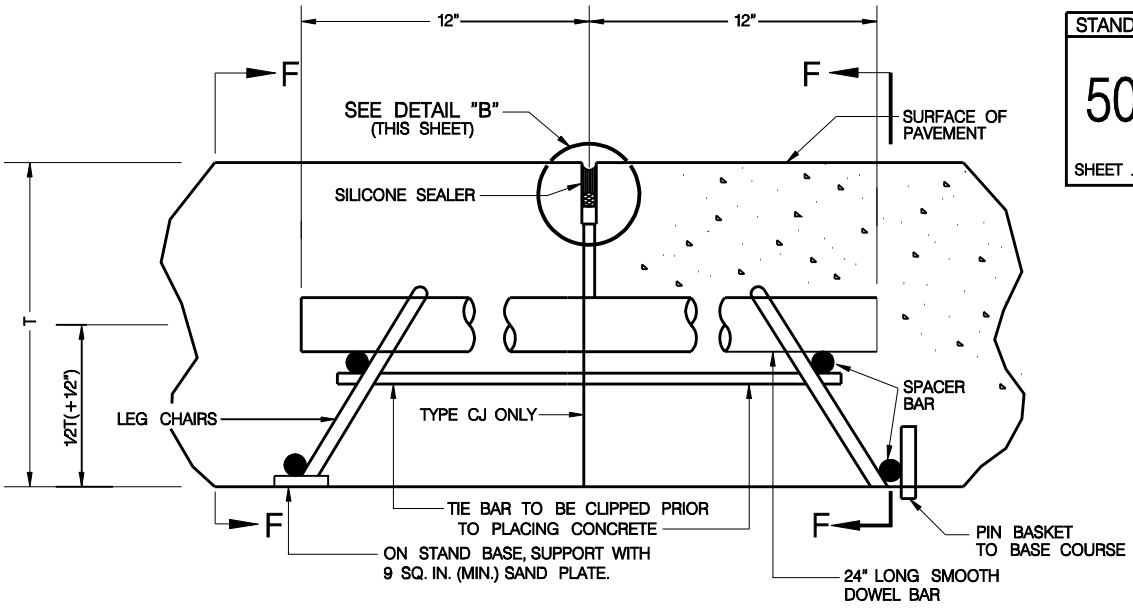
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

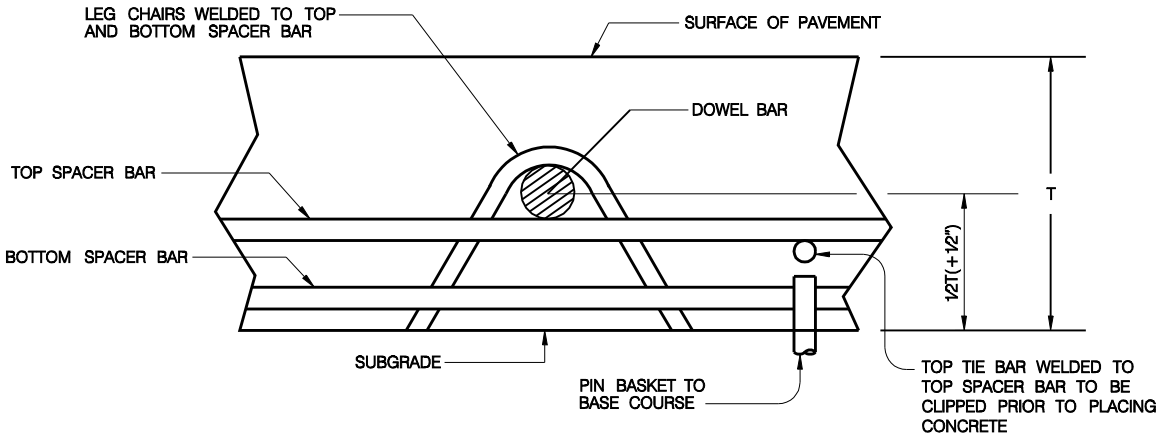
STANDARD PLAN

509–7

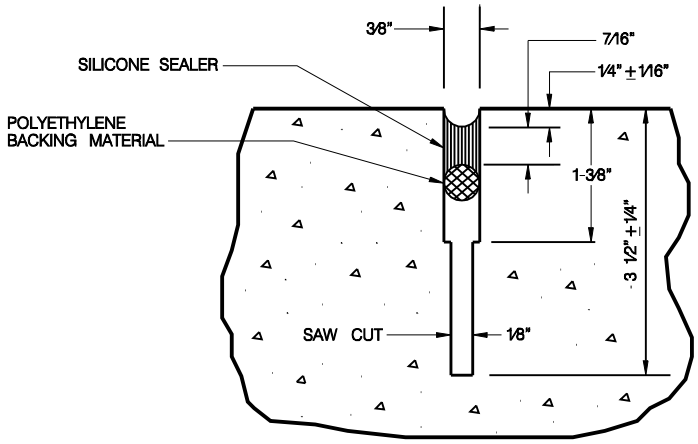
SHEET 4 OF 6



TRANSVERSE DUMMY JOINT OR CONSTRUCTION JOINT (TYPE T)



SECTION F – F



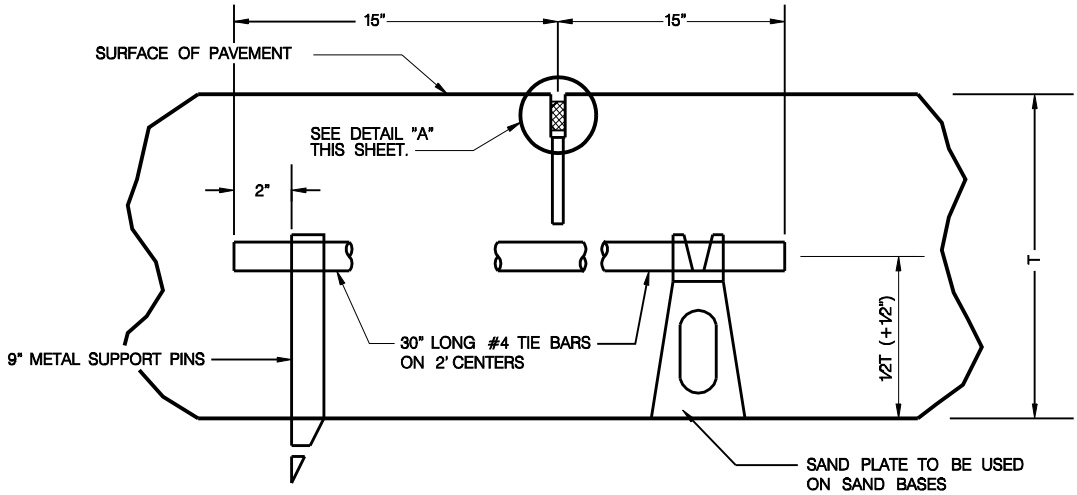
DETAIL "B"

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES	CITY OF SHREVEPORT TRANSVERSE DUMMY JOINT OR CONSTRUCTION JOINT (TYPE T) USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS	DRAWN: Nhan Tran CHECKED: AZ. APPROVED: REW REVISED:

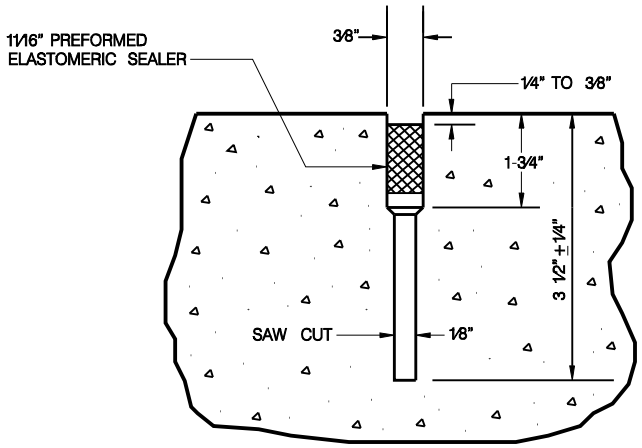
STANDARD PLAN

509–8

SHEET 5 OF 6



LONGITUDINAL JOINT
TYPE L 2



DETAIL "A"

CITY OF SHREVEPORT

LONGITUDINAL JOINT TYPE L–2

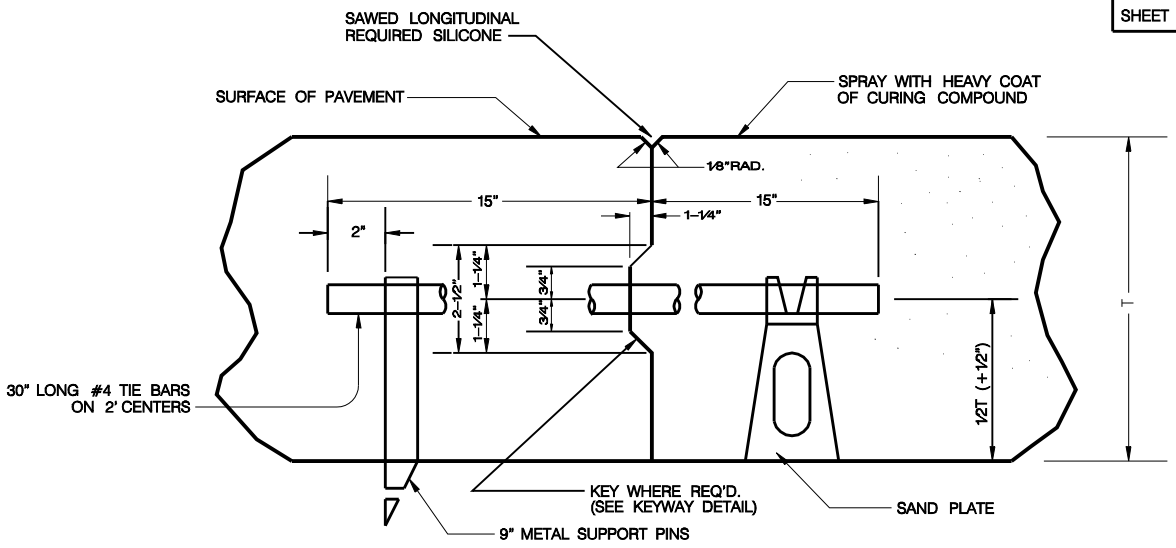
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

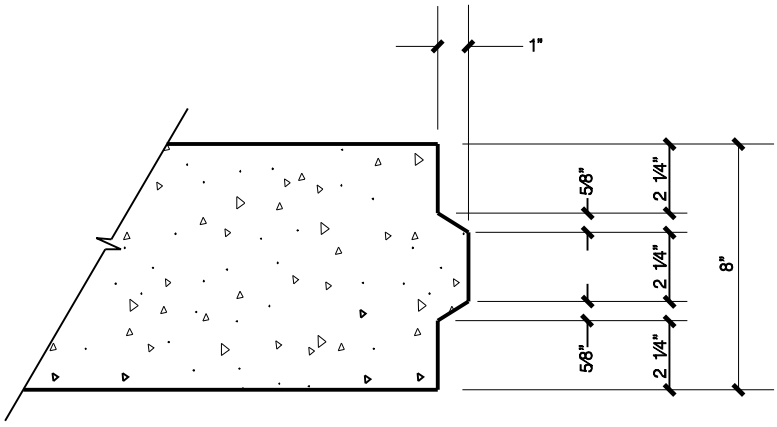
STANDARD PLAN

509–9

SHEET 6 OF 6

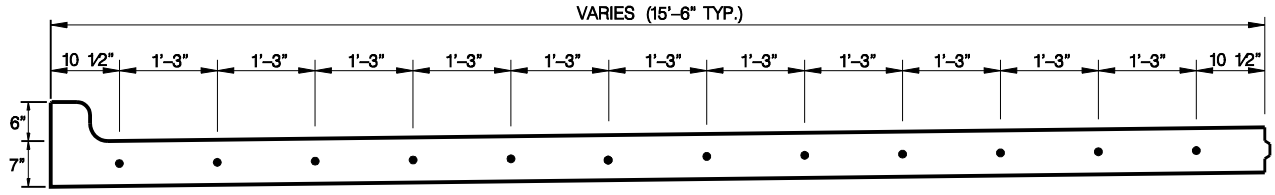


LONGITUDINAL CONSTRUCTION JOINT
(TYPE L 1)



KEYWAY DETAIL

NOT TO SCALE



HALF SECTION SHOWING DOWEL SPACING

NOT TO SCALE

CITY OF SHREVEPORT

LONGITUDINAL JOINT TYPE L–1

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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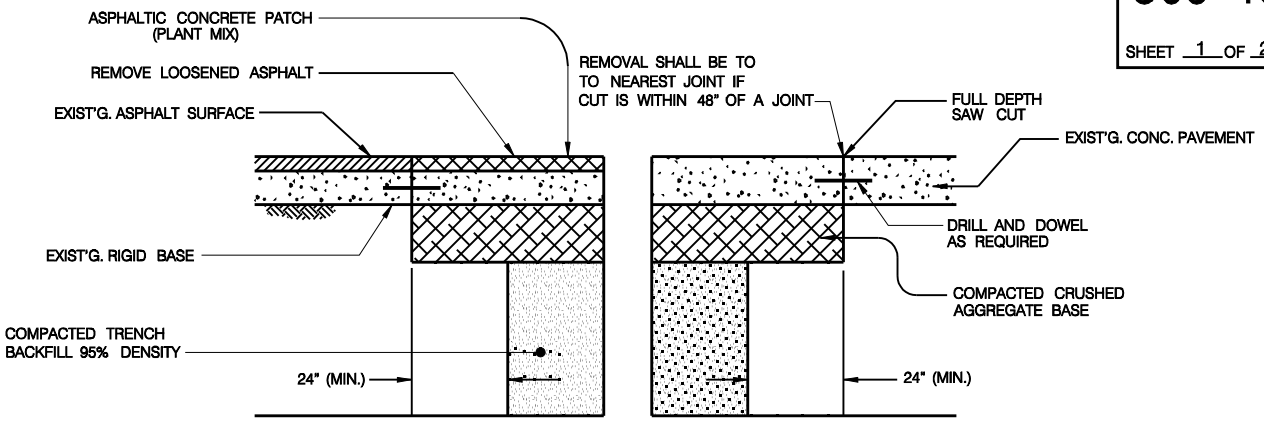
APPROVED: REW
REVISED:

STANDARD PLAN

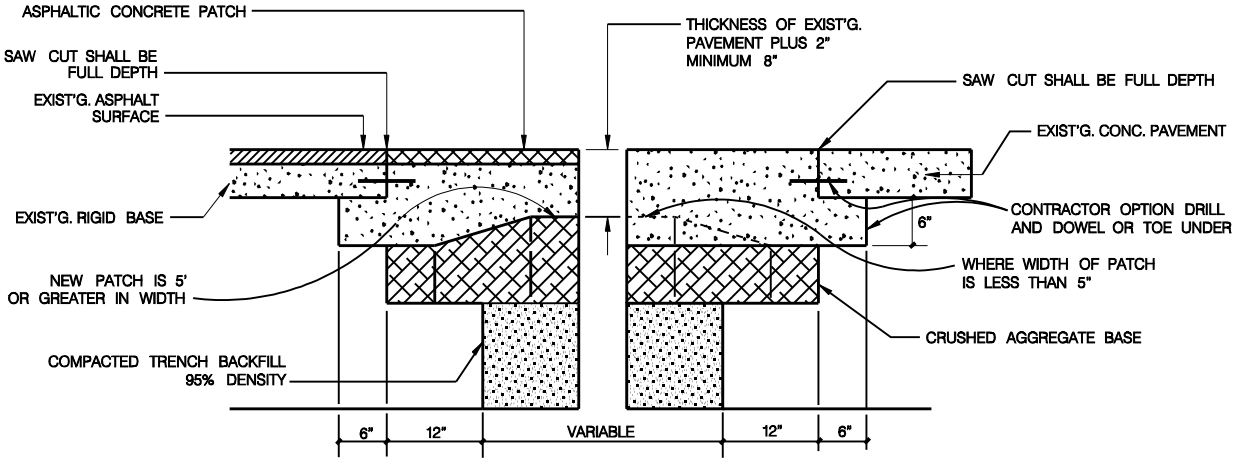
509–10

SHEET 1 OF 2

* NOTE : PAVEMENT UNDER 4 YEARS OF AGE SHALL BE REMOVED AND REPLACED TO NEAREST JOINT.



SECTION "A"
PAVEMENT 4 TO 10 YEARS OF AGE

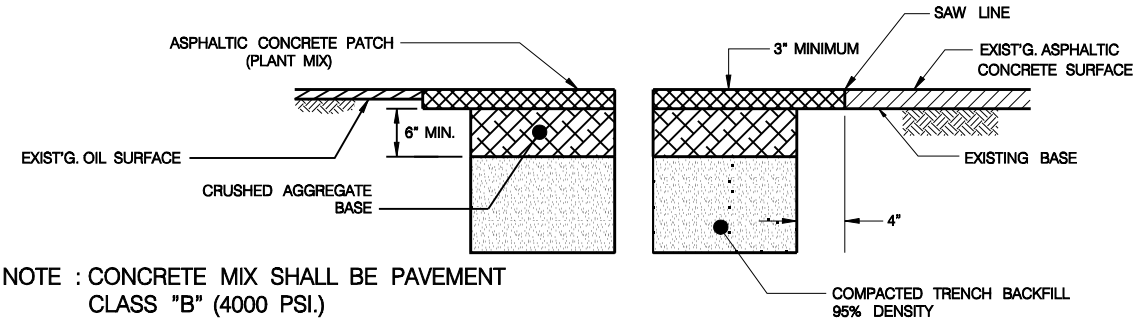


– RIGID PAVEMENT WITH – ASPHALT SURFACE

– CONCRETE PAVEMENT –

SECTION "B"

PAVEMENT OVER 10 YEARS OF AGE
TYPICAL PATCH FOR RIGID PAVEMENT



* NOTE : CONCRETE MIX SHALL BE PAVEMENT CLASS "B" (4000 PSI.)

TYPICAL PATCH FOR FLEXIBLE PAVEMENT

CITY OF SHREVEPORT

PAVEMENT PATCH

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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APPROVED: REW
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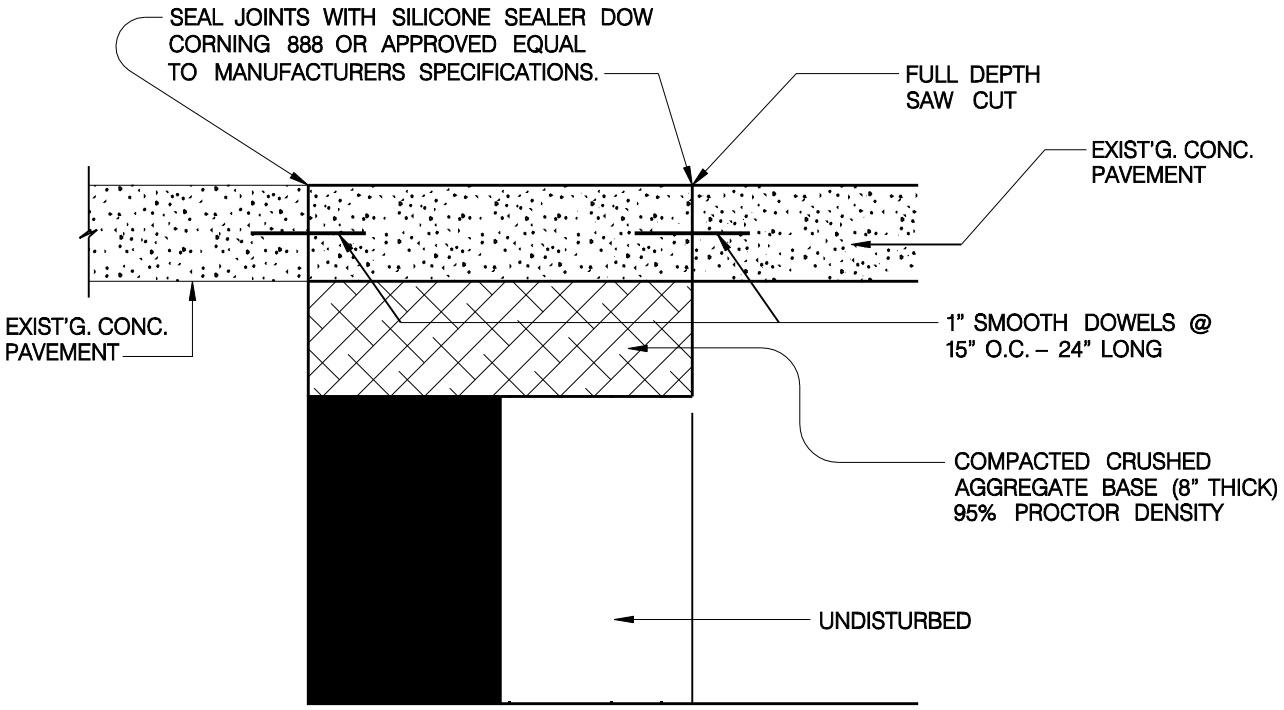
STANDARD PLAN

509–11

SHEET 2 OF 2



NOTES :

1. CONCRETE FINISH SHALL MATCH EXISTING PAVEMENT FINISH.
2. LONGITUDINAL CONSTRUCTION JOINTS SHALL CONSIST OF A KEYED JOINT WITH 30" LONG #4 TIE BARS ON 24" CENTERS. IF KEYED JOINT IS NOT USED TIE BARS SHALL BE PLACED ON 12" O.C.

CITY OF SHREVEPORT

TYPICAL PAVEMENT REPAIR

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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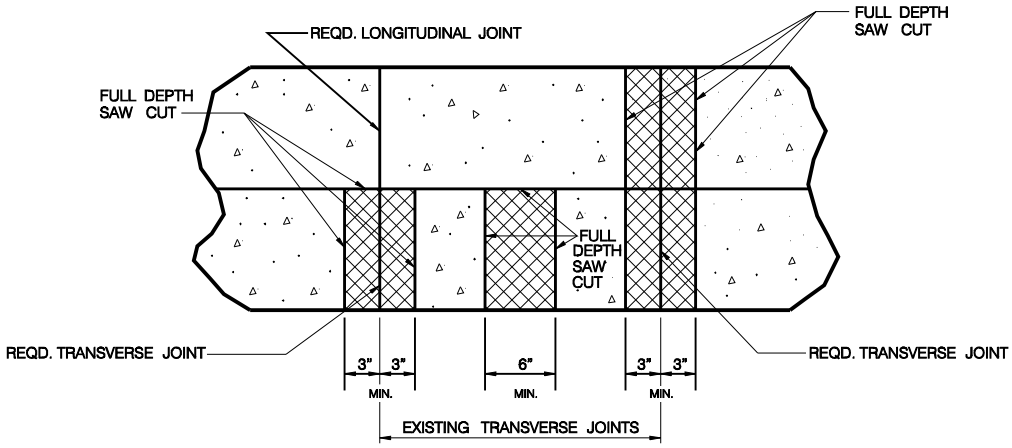
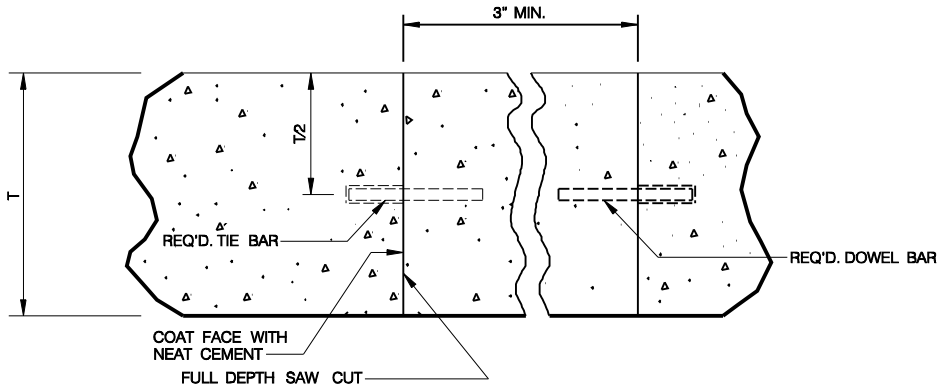
REVISED:

STANDARD PLAN

509–12

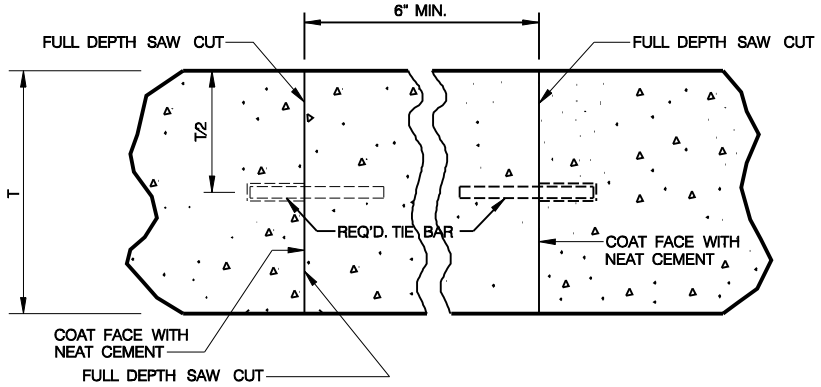
SHEET 1 OF 1





PATCHING DETAIL AT TRANSVERSE JOINTS

NOT TO SCALE



PATCHING DETAIL BETWEEN TRANSVERSE JOINTS

NOT TO SCALE

NOTES :

1. DOWEL BARS AND LONGITUDINAL TIE BARS SHALL TO C.O.S. STANDARD PLANS
2. TRANSVERSE TIE BARS SPACED 12" CENTER TO CENTER, NO. 8 BAR SHALL BE USED FOR TIE BAR
3. RESAW TRANSVERSE JOINTS ON EITHER SIDE OF MID–PANEL PATCH TO A DEPTH TO NEAR THE TOP OF THE DOWELS PRIOR TO PLACING CONCRETE.
4. EXISTING TRANSVERSE VERTICAL FACES TO BE COATED WITH NEAT CEMENT JUST PRIOR TO PLACING CONCRETE.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

JOINT REPAIR DETAIL

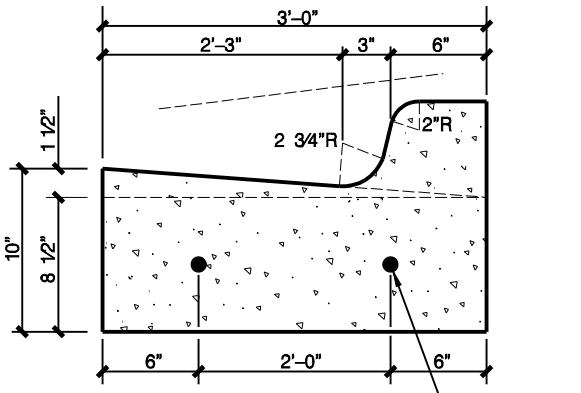
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: R.W.
APPROVED: REW
REVISED:

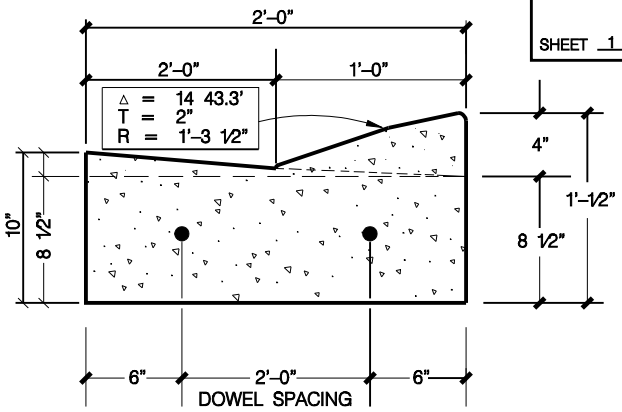
STANDARD PLAN

605–1

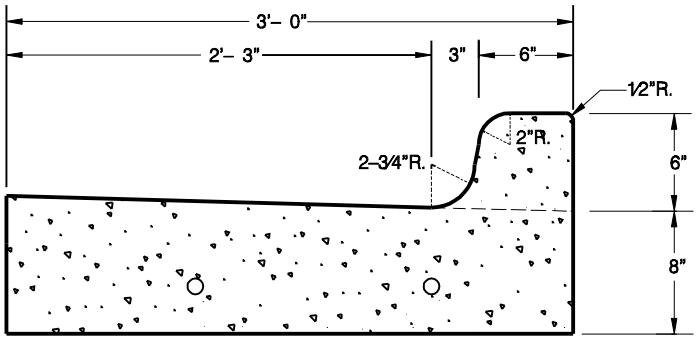
SHEET 1 OF 2



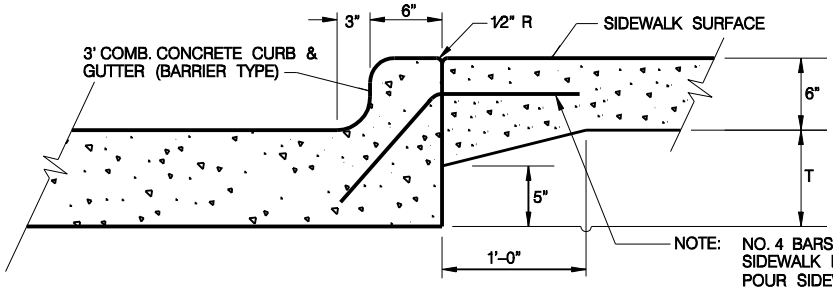
CURB AND GUTTER
(BARRIER TYPE)



CURB AND GUTTER
(MOUNTABLE TYPE)



3 FT. CURB AND GUTTER



SIDEWALK ABUTTING CURB

CITY OF SHREVEPORT

3 FT. CURB AND GUTTER

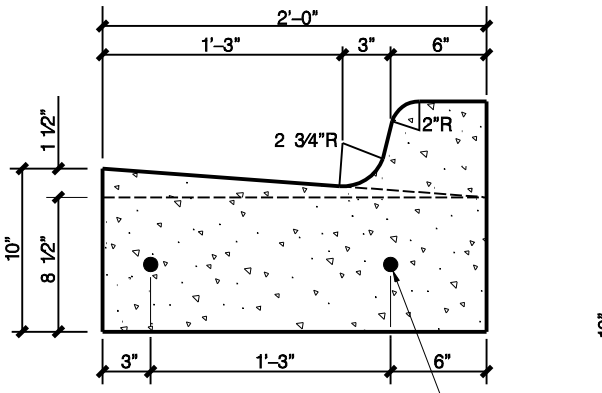
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

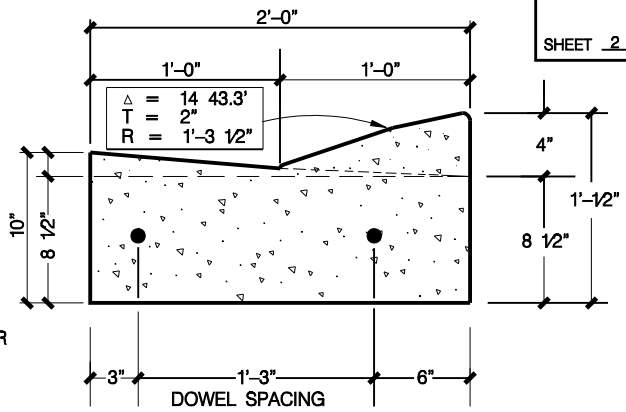
STANDARD PLAN

605–2

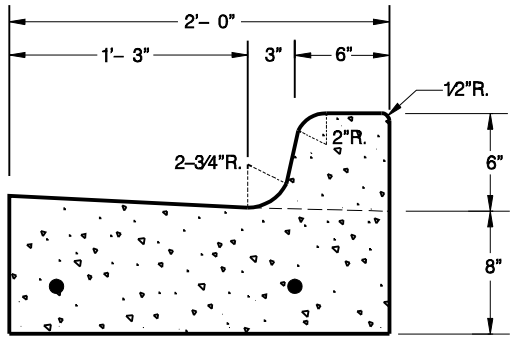
SHEET 2 OF 2



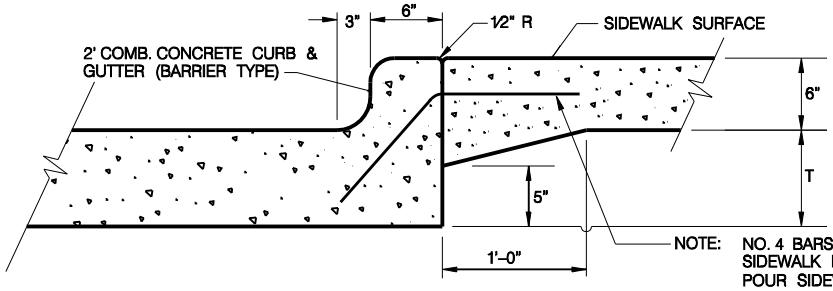
CURB AND GUTTER
(BARRIER TYPE)



CURB AND GUTTER
(MOUNTABLE TYPE)



2 FT. CURB AND GUTTER



SIDEWALK ABUTTING CURB

CITY OF SHREVEPORT

2 FT. CURB AND GUTTER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

605–2a

SHEET 1 OF 1

CITY OF SHREVEPORT

COMPACTION REQUIREMENTS
LOAD BEARING ZONE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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CHECKED: AZ.
APPROVED: REW
REVISED:

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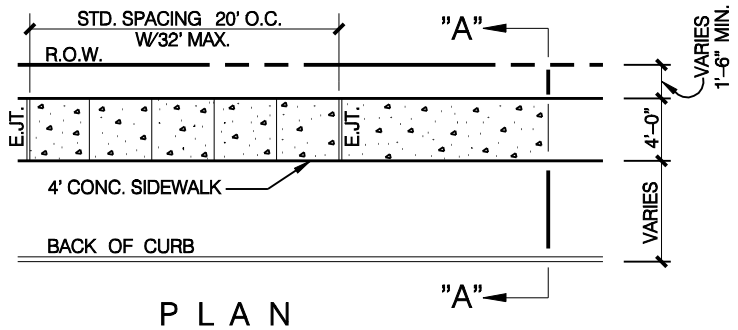
605–3

SHEET 1 OF 2



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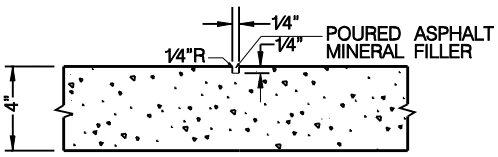
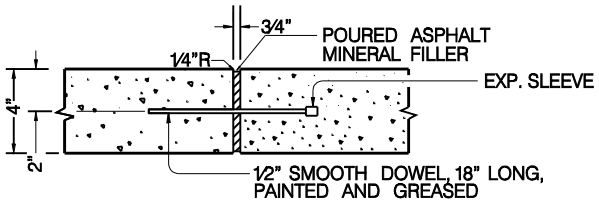
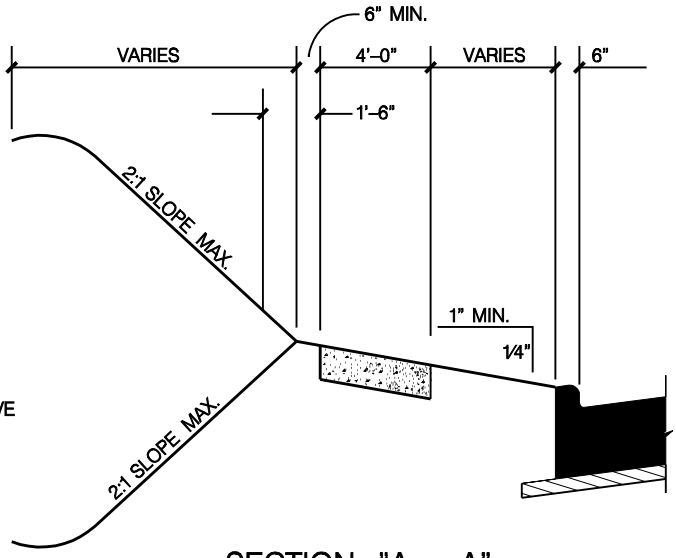


TRANSVERSE DUMMY JOINT



TRANSVERSE EXPANSION JOINT



SECTION "A – A"

DIMENSIONS: STANDARD SIDEWALK SHALL BE FOUR FEET IN WIDTH BY FOUR INCHES IN DEPTH UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.

LOCATION AND GRADE : ALL WALKS SHALL BE PLACED A MINIMUM OF EIGHTEEN INCHES FROM THE PROPERTY LINE OF THE STREET. UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER,AND HAVE A MINIMUM SLOPE OF ONE–FOURTH INCH PER FOOT, DRAINING TOWARD THE CURB,SAID GRADE TO MEET THE EQUIVALENT TOP OF A SIX INCHES CURB.

MATERIALS : CONCRETE SHALL BE REQUIRED IN ALL CASES AND SHALL BE CLASS "A" CONCRETE WITH A COMPRESSIVE STRENGTH OF 3,800 PSI. AT 28 DAYS. EXPANSION JOINT FILLERS SHALL CONSIST OF (A) 1/2"x4" PREMOLDED JOINT FILLERS COMPLING WITH ASTM D994, ASTM D1751, ASTM D1752, OR (B) 1/2"x4" WOOD FILLERS BEING CLEAR HEART RED WOOD OR CLEAR ALL HEART RED CEDAR, UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.

THE CONSTRUCTION OF CONCRETE SIDEWALKS AND ANY ADDITIONAL INFORMATION CONCERNING MATERIALS SHALL CONFORM TO THE FOLLOWING SECTIONS AND SUBSECTIONS OF THE ADOPTED CITY OF SHREVEPORT STANDARD SPECIFICATIONS FOR STREET AND STORM DRAINAGE, AS LISTED BELOW :

MATERIALS :		
PORLAND CEMENT CONCRETE	–	SUBSECTION 201.1 (CLASS A)
JOINTS	–	SUBSECTION 201.3
SUBGRADE	–	SECTION 401
CURING COMPOUND	–	SUBSECTION 201.4
CONSTRUCTION :		
JOINTS	–	SUBSECTION 605.5
FORMS	–	SUBSECTION 605.3
PLACING OF CONCRETE	–	SUBSECTION 605.4
FINISHING	–	SUBSECTION 605.6
PROTECTION	–	SUBSECTION 601.9
BACKFILLING AND CLEANUP	–	SUBSECTION 605.9

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CONCRETE SIDEWALK DETAIL

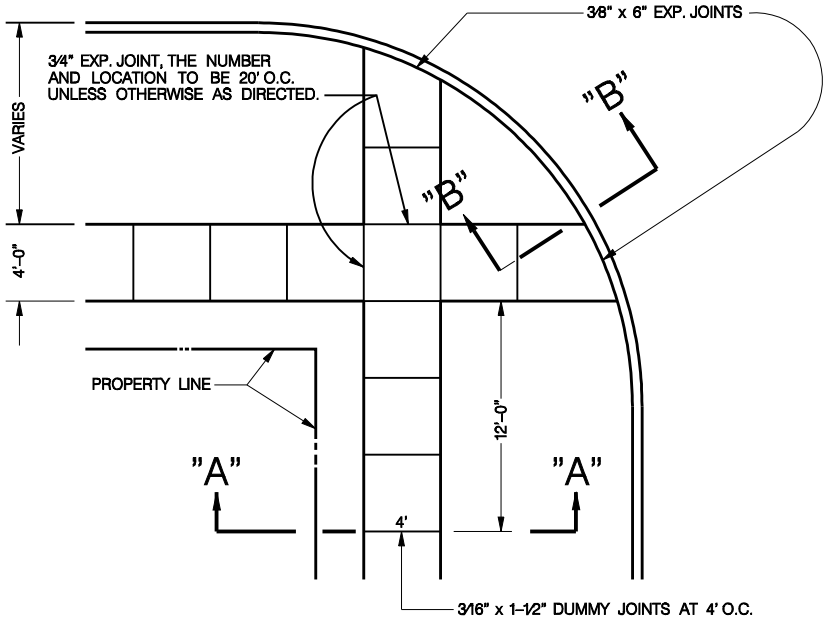
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

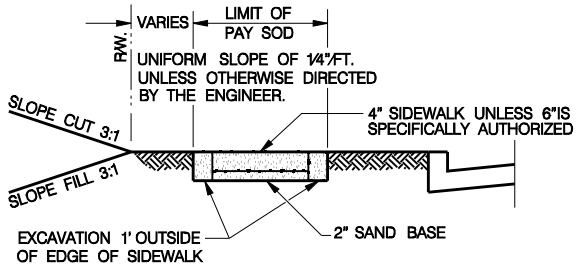
605–4

SHEET 2 OF 2

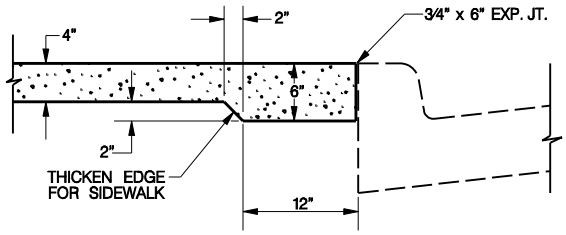


NOTE : FOR HANDICAP RAMP LOCATION AND DETAIL SEE SHEET 2,3 AND 4

P L A N



SECTION "A – A"



SECTION "B – B"

GENERAL NOTES :

1. EXPANSION AND DUMMY JOINTS SHALL BE AS SHOWN ABOVE. EXP. JOINT SHALL ALSO BE PLACE IN THE SIDEWALK SECTION AT DRIVEWAY AND ALLEY RETURN. ALL JOINTS SHALL BE CLEAN AND EDGED WITH AN EDGER HAVING A 184" RADIUS. JOINTS SHALL BE FLUSH WITH THE FINISHED SUFACE.
2. FORMS SHALL BE EITHER WOOD OR STEEL AND SHALL MEET ALL REQUIREMENTS OF THESE SPECIFICATIONS.
3. PROCEDURES : FOR FUTHER REQUIREMENTS FOR FORMS, FORMS SETTING, PLACING, FINISHING AND CURING REFER TO STANDARD SPECIFICATIONS AND BID DOCUMENTS.
4. ALL UTILITY POLES, METER BOXES, ECT. IN SIDEWALK AREA SHALL HAVE 3/8" JOINT MATERIAL (FULL DEPTH) PLACE AROUND THEM BEFORE PLACING CONCRETE.
5. NEW 4" SIDEWALK IS TO SIT ON 2" SAND BASE. THE GRADE OF THE NEW SIDEWALK IS TO MATCH THE OLD GRADE, EXCAVATION TO A DEPTH OF 6" BELOW THE FINISHED GRADE FOR A WIDTH OF ONE (1) FT. OUTSIDE OF THE EDGE OF THE SIDEWALK IS REQUIRED. EXCAVATION AND SAND BASE IS INCIDENTAL TO THE COST PER SQUARE YARD OF NEW 4" SIDEWALK.
6. NEW 6" SIDEWALK ON 2" SAND BASE WILL ONLY BE USED WHEN SPECIFICALLY AUTHORIZED BY THE CITY.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CONCRETE SIDEWALK DETAIL

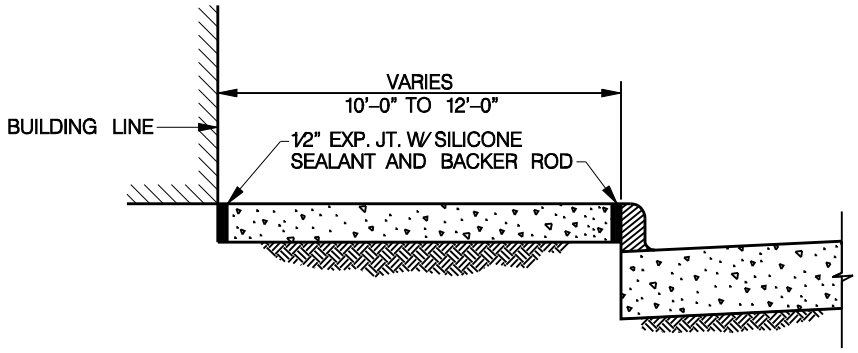
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

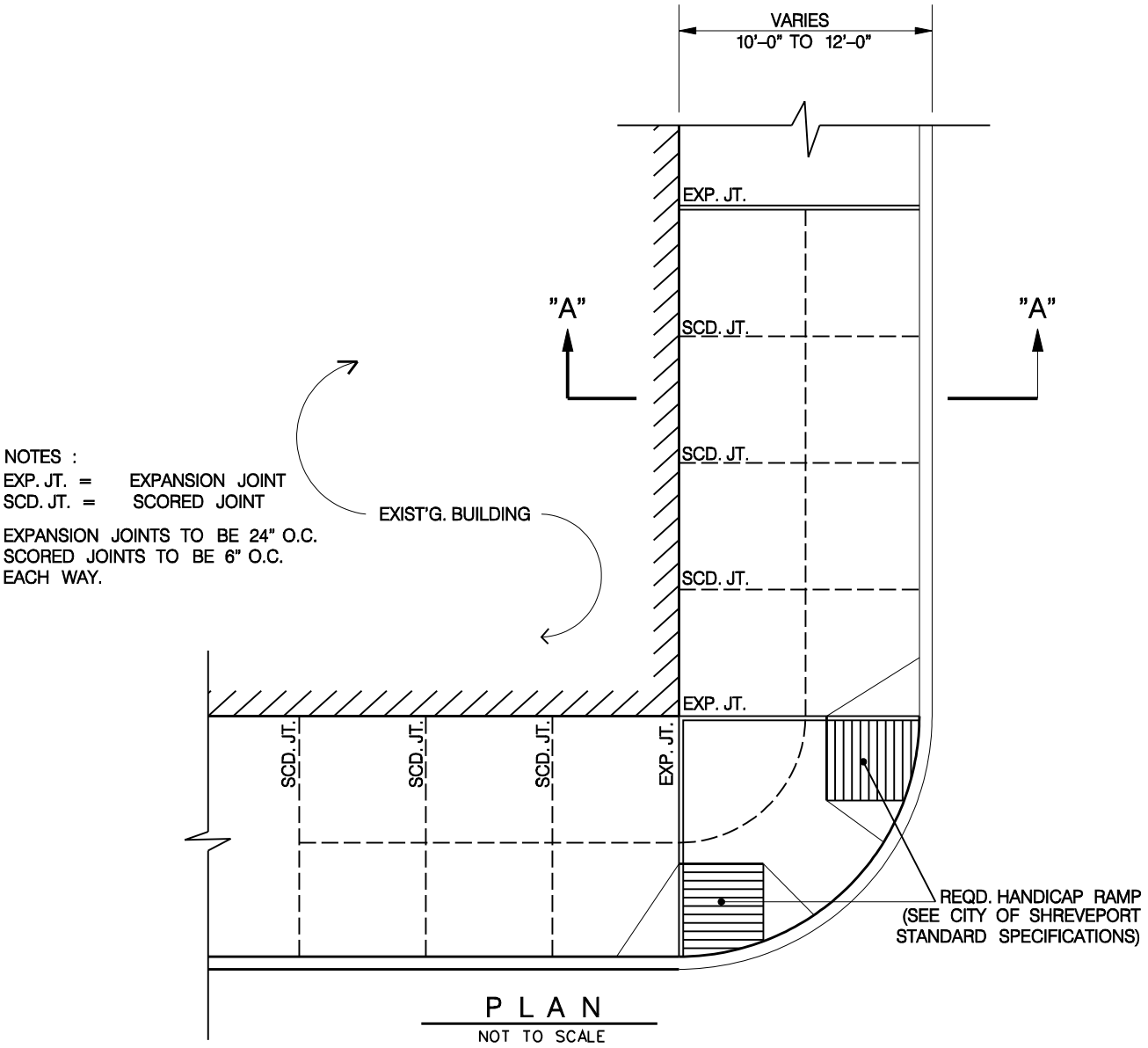
605–5

SHEET 1 OF 1



SECTION "A – A"

NOT TO SCALE



NOTES :

EXP. JT. = EXPANSION JOINT

SCD. JT. = SCORED JOINT

EXPANSION JOINTS TO BE 24" O.C.
SCORED JOINTS TO BE 6" O.C.
EACH WAY.

P L A N

NOT TO SCALE

CITY OF SHREVEPORT

TYPICAL SIDEWALK DETAIL FOR DOWNTOWN SIDEWALK

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED:

STANDARD PLAN

601–1

SHEET 1 OF 5

GENERAL NOTES

1. ALL CORNERS TO BE CHAMFERED 3⁄4".
2. RUBBED FINISH REQUIRED ON EXPOSED SURFACES.
3. REINFORCE CONCRETE SHALL BE CLASS "A" CONCRETE (3800 P.S.I. – 28 DAYS). PORLAND CEMENT SHALL CONFORM TO AASHO DESIGNATION M–85. REIF. BARS SHALL CONFORM TO A.S.T.M. DESIGNATION A–65 (GRADE 40).
4. STEEL IN FRAME AND COVER TO CONFORM TO A.S.T.M. DESIGNATION A–36 AS AMENDED TO DATE, AND SHALL BE GALVANIZED AFTER FABRICATION. GAVANIZING TO CONFORM TO A.S.T.M. A–123.
5. STEEL MESH TO CONFORM TO A.S.T.M. A–165.
6. BACKFILL TO BE COMPACTED TO 95% DENSITY.
7. INLET MAY BE CONSTRUCTED AS SINGLE UNIT OR IN MULTIPLES OF 2 AND 3 UNITS USING THE CONNECTING BEAM AS SHOWN IN DETAIL "A".
8. THE MINIMUM DISTANCE FROM THE TOP OF A PIPE ENTERING OR LEAVING THE INLET BOX SHALL BE 2'–6". FOR PIPE UNDER PAVEMENT (FRONT OF INLET BOX) AND 2'–0" FOR SIDES AND BACK OF THE INLET BOX.
9. STORM SEWER PIPE SHOULD BE INSTALLED BEFORE INTAKE SIDEWALL CONSTRUCTION IS STARTED. SIDEWALLS SHOULD BE CONSTRUCTED AS INDICATED WITH OPENINGS FOR STORM SEWER SMOOTHLY SHAPED AND NO INLET PIPES PROTECTING UNNECESSARILY INTO WELL OUTLET PIPE SHALL NOT PROJECT BEYOND INSIDE FACE OF SIDEWALL.
10. ALL REINFORCING STEEL SHALL BE 1–1⁄2" CLEAR OF CONCRETE SURFACE UNLESS OTHERWISE NOTED.
11. REINFORCING STEEL SHALL BE BENT AROUND PIPE OPENING WHEN POSSIBLE. IF STEEL IS CUT, A DIAGONAL BAR SHALL BE USED TO TIE ALL CUT END TOGETHER.
12. EXPANSION JOINT DETAIL AND DOWEL PLACEMENT SAME AS THAT SHOWN ON APPROPRIATE PAVEMENT AND CURB STANDARD PLANS.
13. A CONCRETE FILLET SHALL BE PLACED IN THE BOTTOM OF THE INTAKE APPROXIMATELY AS INDICATED AS DIRECTED BY THE CITY ENGINEER. SPECIAL SHAPING OF THIS FILLET IS REQUIRED TO PROVIDE A SMOOTH CHANNEL THROUGH THE INLET BOX. TOP SURFACE OF THE FILLETSHALL SLOPE APPROXIMATELY 1 INCH PER FOOT TOWARD THE CHANNEL.
14. STEPS SHALL BE PLACED OF 12" INTERWALS IN ALL STRUCTURES HAVING A DEPTH OF MORE THAN 4 FT. THE MINIMUM WIDTH SHALL BE 16" AND THE RUNG OR CLEAT SHALL BE 7" FROM THE FACE OF THE WALL. MATERIAL TO MEET SPECIFICATIONS FOR GRAY IRON CASTINGS, SA.S.T.M. DESIGNATION A–48, CLASS 25. MANHOLE STEP SHALL BE PAINTED WITH AN ASPHALT BASE PAINT IN CONFORMANCE WITH U.S.A. STANDARD A21. 10–8.
15. NO SCALE, FOLLOW DIMENSIONS.

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES
DOS

CITY OF SHREVEPORT

CATCH BASIN AND
48" STANDARD INLET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A Z.
REVISED:
REW
REVISED:

STANDARD PLAN

310–1

SHEET 1 OF 11

STANDARD FOR SILT FENCE

DEFINITION

TEMPORARY BARRIER FENCE MADE OF BURLAP OR POLYPROPYLENE MATERIAL WHICH IS WATER PERMEABLE BUT WILL TRAP WATER–BORNE SEDIMENT.

PURPOSE

TO INTERCEPT AND DETAIN WATER–BORNE SEDIMENT FROM UNPROTECTED AREA OF LIMITED EXTENT.

CONDITIONS WHERE PRACTICE APPLIES

SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PER–COLATE THROUGH. THIS FENCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR OTHER DRAINAGE WAY.

DESIGN CRITERIA

SILT FENCE SHALL NOT BE CONSTRUCTED OUTSIDE THE PROPERTY LINES WITHOUT OBTAINING EASEMENTS FROM THE AFFECTED PROPERTY OWNERS. A DESIGN IS NOT REQUIRED FOR THE INSTALLATION OF SILT FENCE, HOWEVER THE FOLLOWING CRITERIA SHALL BE OBSERVED:

DRAINAGE AREA –	LESS THAN 2 ACRES
HEIGHT –	36 INCH MINIMUM HEIGHT MEASURED FROM THE EXISTING OR GRADED GROUND.
MATERIAL –	BURLAP WEIGHING APPROXIMATELY 7–1/2 OUNCES PER SQUARE YARD OR APPROVED JUTE FABRIC OR GEOTEXTILE FABRIC.
SUPPORT –	STEEL OR WOOD FENCE POSTS SPACED A MAXIMUM OF 8 FEET APART. POST SHALL HAVE A MINIMUM LENGTH OF 5 FEET AND BE SET AT LEAST 18 INCHES DEEP. WOVEN LIVESTOCK WIRE TO SUPPORT THE MATERIAL SHALL BE AT LEAST 36 INCH HIGH WITH A MAXIMUM MESH OPENING OF 6 INCHES AND FABRICATED FROM 14 GAGE WIRE OR LARGER.

OUTLET

SILT FENCE SHALL BE PLACED AND CONSTRUCTED IN SUCH A MANNER THAT RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE INTERCEPTED, SEDIMENT TRAPPED AND THE SURFACE RUNOFF ALLOWED TO PERCOLATES THROUGH THE STRUCTURE.

SILT FENCE SHALL BE PLACED IN SUCH A MANNER THAT SURFACE RUNOFF WHICH PERCOLATES THROUGH WILL FLOW ONTO AN UNDISTURBED STABILIZED AREA OR STABILIZED OUTLET. IF PLACED IN SERIES, THE FURTHEREST DOWNSTREAM FENCE WILL FLOW ONTO AN UNDISTURBED STABILIZED AREA OR STABILIZED OUTLET.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

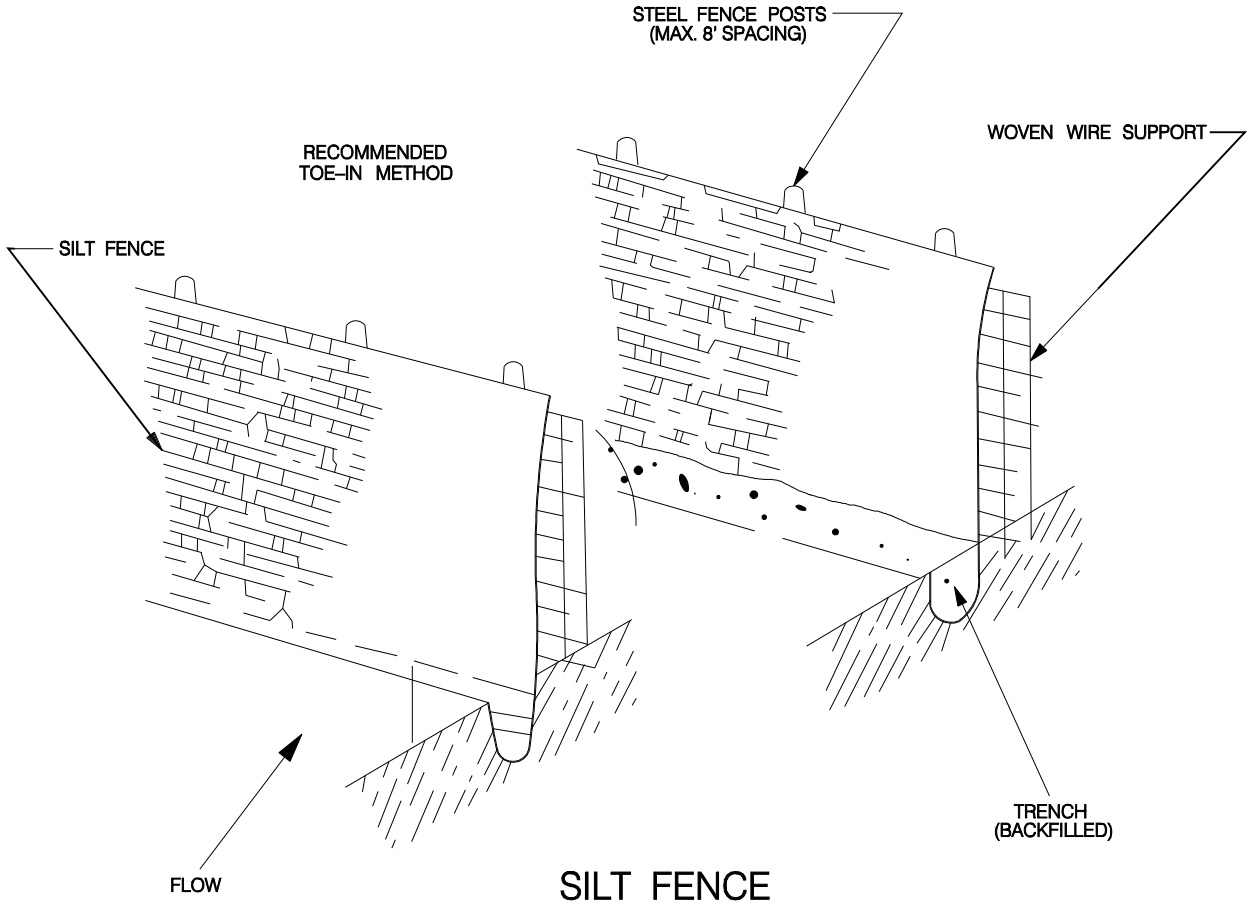
310–2

SHEET 2 OF 11

GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 3–4 FEET WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. *
7. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO. 7 ABOVE.

* TO BE REMOVED BY CONTRACTOR WHEN PERMANENT EROSION MEASUREDS ARE DEEMED TO BE EFFECTIVE.



SILT FENCE

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ
APPROVED: REW
REVISED:

STANDARDS FOR SEDIMENT TRAP

STANDARD PLAN
310–3
SHEET 3 OF 11

DEFINITIONS

A SMALL TEMPORARY PONDING AREA FORMED BY CONSTRUCTING AN EARTHEN EMBANKMENT TO INTERCEPT SEDIMENT–LADEN RUNOFF AND TO TRAP AND RETAIN SEDIMENT.

PURPOSE

TO DETAIN SEDIMENT–LADEN RUNOFF FROM SMALL DISTURBED AREAS LONG ENOUGH TO ALLOW THE MAJORITY OF THE SEDIMENT TO SETTLE OUT.

CONDITIONS WHERE PRACTICE APPLIES

INSTALLED AT POINTS OF DISCHARGE FROM DISTURBED AREA FOR A MAXIMUM PERIOD OF 10 MONTHS.

DESIGN CRITERIA

IF ANY OF THE DESIGN CRITERIA PRESENTED HERE CANNOT BE MET, SEE STANDARDS FOR SEDIMENT BASIN.

DRAINAGE AREA – SHALL BE LESS THAN 5 ACRES.

LAYOUT – SHALL BE LOCATED TO MAXIMIZE STORAGE BENEFIT FROM TERRAIN, FOR EASE OF CLEANOUT, AND TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES.

SIZE – THE VOLUME OF THE TRAP MEASURED BELOW THE CREST OF THE OUTLET SHALL BE AT LEAST 1000 CUBIC FEET PER ACRE OF DRAINAGE AREA.

CLEANOUT – SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL CAPACITY WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE DESIGN VOLUME OR 1 FOOT, WHICHEVER IS LESS.

EMBANKMENT – THE EMBANKMENT SHALL HAVE A 3 FOOT TOP WIDTH, SIDE SLOPES OF 2:1 OR FLATTER, AND SHALL NOT EXCEED 5 FEET IN HEIGHT AS MEASURED AT THE LOW POINT OF THE ORIGINAL GROUND LINE. FILL MATERIAL SHALL BE FREE OF WOODY VEGETATION, LARGE STONES, AND OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED IN EIGHT–INCH LAYERS BY TRAVERSING WITH CONSTRUCTION EQUIPMENT.

EXCAVATION – ANY EXCAVATED PORTION OF SEDIMENT TRAP SHALL HAVE 2:1 OR FLATTER SLOPES. CARE SHALL BE TAKEN TO MINIMIZE EROSION AND WATER POLLUTION DURING EXCAVATION OPERATIONS.

OUTLET

1. THE OUTLET SHALL BE A CORRUGATED METAL PIPE WITH A PERFORATED CORRUGATED METAL RISER. THE RISER DIAMETER SHALL BE ONE SIZE LARGER THEN THE PIPE. THE RISER SHALL BE WRAPPED WITH THREE LAYERS OF 125 MILS THICK NON–WOVEN U–V RESISTANT FILTER CLOTH. THE PORTION OF THE RISER ABOVE THE PIPE CONNECTIONS SHALL BE PERFORATED WITH ONE 1/2–INCH DIAMETER HOLE PER 40 SQUARE INCHES OF SURFACE AREA. THE RISER CREST SHALL BE 1–1/2 FEET BELOW THE TOP OF THE EMBANKMENT.
2. UNLESS OTHERWISE SPECIFIED, PIPE SIZES SHALL BE SELECTED FROM THE FOLLOWING TABLE:

PIPE DIAMETER D. (INCHES)	MAXIMUM DRAINAGE AREA (ACRES)
12	0.75
15	1.25
18	2.0
21	3.0
24	5.0

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

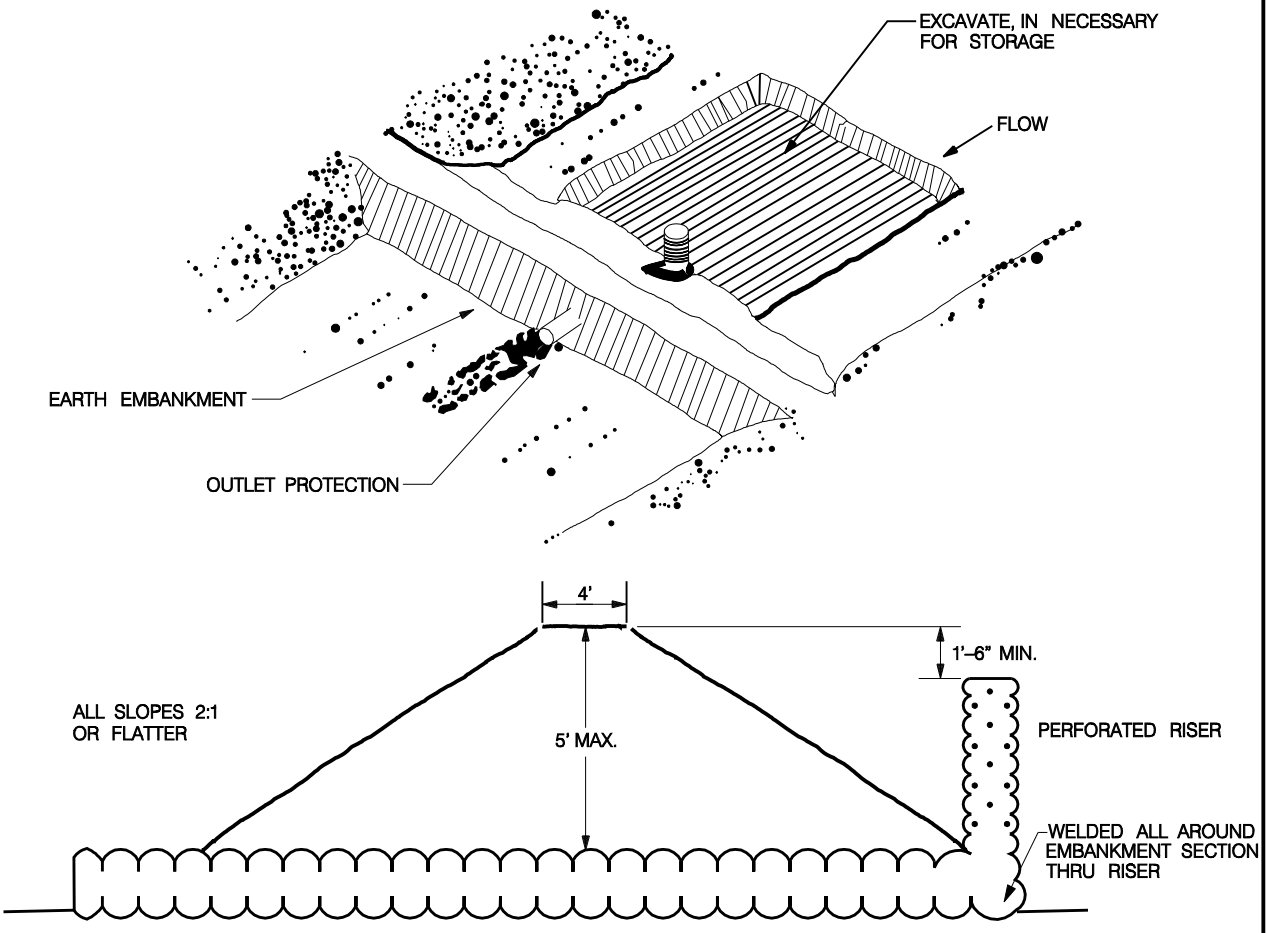
STANDARD PLAN

310–4

SHEET 4 OF 11

GENERAL NOTES

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR EMBANKMENT SHALL BE FREE OF ROOTS OF OTHER WOODY VEGETATION, AS WELL AS STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OB–JECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE DESIGN DEPTH OF THE TRAP OR 1 FOOT, WHICHEVER IS LESS. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
4. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED BY THE CONTRACTOR.
5. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
6. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
7. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
8. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.



PIPE OUTLET SEDIMENT TRAP

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

310–5

SHEET 5 OF 11

STANDARD FOR LAND GRADING

DEFINITIONS

RESHAPING OF THE EXISTING TOPOGRAPHY IN ACCORDANCE WITH A PLAN AS DETERMINED BY ENGINEERING SURVEYS, DESIGN AND LAYOUT

PURPOSE

LAND GRADING IS USED FOR ONE OR MORE OF THE FOLLOWING PURPOSES: PROVIDE MORE SUITABLE SITES FOR BUILDING, FACILITIES, AND OTHER LAND USES; IMPROVE SURFACE DRAINAGE AND CONTROL EROSION.

DESIGN CRITERIA

THE LAND GRADING PLAN AND INSTALLATION SHALL BE BASED UPON ADEQUATE SURVEYS AND INVESTIGATIONS. THE PROPOSED LAND USE AND GRADING PLAN SHOULD FIT AND UTILIZE EXISTING TOPOGRAPHY AND NATURAL SURROUNDINGS AND MAKE EXTREME GRADE MODIFICATIONS UNNECESSARY. THE PLAN IS TO SHOW THE LOCATION, SLOPE, CUT, FILL AND FINISH ELEVATION OF THE SURFACES TO BE GRADED AND THE AUXILIARY PRACTICES FOR SAFE DISPOSAL OF RUNOFF WATER, SLOPE STABILIZATION, EROSION CONTROL, AND DRAINAGE SUCH AS WATERWAYS, LINED CHANNELS, DIVERSIONS, GRADE STABILIZATION STRUCTURES, RETAINING WALLS, AND SURFACE AND SUBSURFACE DRAINS.

THE GRADING PLAN SHALL BE IN ACCORDANCE WITH THE FOLLOWING DESIGN CRITERIA:

1. THE CUT FACE OF EARTH EXCAVATION WHICH IS TO BE VEGETATED SHALL NOT BE STEEPER THAT 3 HORIZONTAL TO 1 VERTICAL. CUT SLOPES OF MATERIALS NOT TO BE VEGETATED SHALL BE AT THE SAFE ANGLE OF REPOSE FOR THE MATERIALS ENCOUNTERED. UNVEGETATED CUT SLOPES SHALL BE PROTECTED BY MECHANICAL TREATMENT TO PROTECT THEM FROM EROSION.
2. THE PERMANENT EXPOSED FACES OF FILLS SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
3. PROVISIONS ARE TO BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE NATURAL WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
4. SUBSURFACE DRAINAGE IS TO BE PROVIDED IN AREAS HAVING HIGH WATER TABLE OR SEEPAGE CONDITIONS THAT WOULD AFFECT SLOPE STABILITY, BUILDING FOUNDATIONS, OR CREATE UNDESI–RABLE WETNESS.
5. EXCAVATIONS SHALL NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM EROSION, SLIDING, SETTLING OR CRACKING.
6. NO FILL IS TO BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OR SO PLACED ADJACENT TO THE BANK OF A CHANNEL AS TO CREATE BANK FAILURE OR REDUCE THE NATURAL CAPACITY OF THE STREAM.
7. FILLS ARE TO CONSIST OF MATERIAL FROM CUT AREAS, BORROW PITS, OR OTHER APPROVED SOURCES.

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

310–6

SHEET 6 OF 11

GENERAL NOTES

1. TIMBER, LOGS BRUSH, RUBBISH, AND VEGETATIVE MATTER THAT WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OF FILL AREAS SHALL BE REMOVED AND DISPOSED OF ACCORDING TO THE PLAN. AVOID UNNECESSARY REMOVAL OF TREES AND VEGETATION THAT COULD BE LEFT TO ENHANCE THE ATTRACTIVENESS OF THE DEVELOPMENT.

2. TOP SOIL IS TO BE STRIPPED AND STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISH GRADING OF ALL EXPOSED AREAS REQUIRING TOPSOIL FOR THE ESTABLISHMENT OF VEGETATION.

3. FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS AND STUMPS IN AMOUNTS THAT WILL BE DESTRIMENTAL TO CONSTRUCTING STABLE FILLS.

4. CUT SLOPES WHICH ARE TO BE TOPSOILED WILL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.

5. ALL FILLS INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SEWERS AND CONDUITS SHOULD BE TESTED FOR STRENGTH AND THE FOUNDATIONS DESIGNED ACCORDINGLY. COMPACTION OF OTHER FILLS WILL BE AS REQUIRED TO REDUCE SLIPPING, EROSION, OR EXCESS SATURATION.

6. MAXIMUM THICKNESS OF LAYERS OF FILLS ARE NOT TO EXCEED 8 INCHES.

7. ALL AREAS ARE TO BE ROUGH GRADED TO WITHIN 0.2 FOOT OF THE PLANNED ELEVATION AFTER ALLOWANCE HAS BEEN MADE FOR THICKNESS OF TOPSOIL, PAVING OR OTHER INSTALLATIONS.

8. ALL DISTURBED AREAS SHALL BE LEFT IN A WELL DRAINED, NEAT AND FINISHED APPEARANCE.

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

310–7

SHEET 7 OF 11

STANDARDS FOR DIKES

DEFINITION

A DIKE IS A TEMPORARY RIDGE OF COMPACTED SOIL. A DIVERSION DIKE IS PLACED IMMEDIATELY ABOVE CUT OR FILL SLOPES. AN INTERCEPTOR DIKE IS LOCATED ACROSS RIGHT–OF–WAY OR DISTURBED AREAS. A PERIMETER DIKE IS PLACED ALONG THE PERIMETER OF THE DISTURBED AREA OR SITE.

PURPOSE

A DIVERSION DIKE INTERCEPTS STORM RUNOFF FROM SMALL UPLAND AREAS AND DIRECTS IT FROM THE EXPOSED SLOPES TO AN ACCEPTABLE OUTLET. AN INTERCEPTOR DIKE SHORTENS THE LENGTH OF EXPOSED SLOPES BY INTERCEPTING STORM RUNOFF AND DIVERTING IT TO AN ACCEPTABLE OUTLET. A PERIMETER DIKE PREVENTS OFFSITE STORM RUNOFF FROM ENTERING THE DISTURBED AREA OF PREVENTS SEDIMENT–LADEN WATER FROM LEAVING THE DISTURBED AREA.

CONDITIONS WHERE PRACTICE APPLIES

DIKES ARE CONSTRUCTED ADJACENT TO OR ACROSS DISTURBED AREAS TO PREVENT EXCESSIVE EROSION OR TO TRANSPORT SEDIMENT–LADEN WATER TO A SEDIMENT TRAPPING DEVICE. THE DIKES SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREAS ARE PERMANENTLY STABILIZED.

DESIGN CRITERIA

DIKES SHALL NOT BE CONSTRUCTED OR DISCHARGED OUTSIDE THE PROPERTY LINES WITHOUT OBTAINING EASEMENTS FROM THE AFFECTED PROPERTY OWNERS. A DETAILED DESIGN IS NOT REQUIRED FOR DIKES; HOWEVER, THE FOLLOWING CRITERIA SHALL BE USED IN SELECTING SITES FOR PLACEMENT:

DRAINAGE AREA – LESS THAN 5 ACRES (FOR LARGE AREAS, SEE STANDARDS FOR DIVERSION).

TOP WIDTH – 2 FEET MINIMUM.

HEIGHT – COMPACTED FILL SHALL BE 18 INCHES MINIMUM HEIGHT MEASURED FROM GROUND AT UPSLOPE TOE TO TOP OF THE DIKE.

SIDE SLOPES – 2:1 OR FLATTER (FLAT ENOUGH TO ALLOW CONSTRUCTION TRAFFIC TO CROSS IF DESIRED).

GRADE – DEPENDENT UPON TOPOGRAPHY, BUT MUST HAVE POSITIVE DRAINAGE. INTERCEPTOR DIKE SHOULD BE BETWEEN 0.4 PERCENT AND 1.0 PERCENT.

STABILIZATION – WHERE SLOPE OF CHANNEL (FLOW AREA) IS:
– 1%–5% – STABILIZATION MAY BE REQUIRED DEPENDING ON THE SITE CONDITIONS.
– OVER 5% – SEE STANDARDS FOR DIVERSION.

SPACING – INTERCEPTOR DIKES SHALL BE PLACED SUCH THAT THE MAXIMUM VERTICAL DISTANCE BETWEEN DIKES IS 10 FEET.

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

310–8

SHEET 8 OF 11

OUTLET

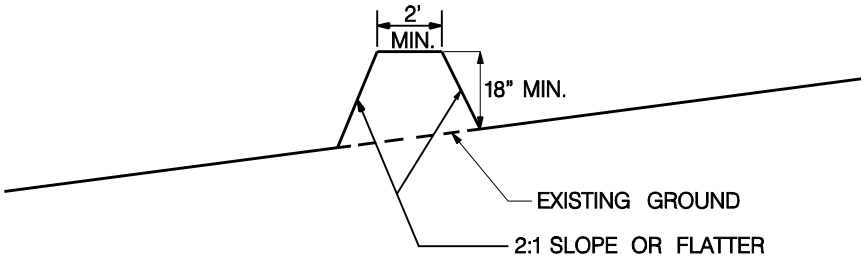
1. RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL OUTLET DIRECTLY ONTO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER (SEE STANDARDS FOR LEVEL SPREADER) OR GRADE STABILIZATION STRUCTURE (SEE STANDARDS FOR GRADE STABILIZA–TION STRUCTURE).

2. RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP (SEE STANDARDS FOR SEDIMENT TRAP) OR A SEDIMENT BASIN (SEE STANDARDS FOR SEDIMENT BASIN) OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.

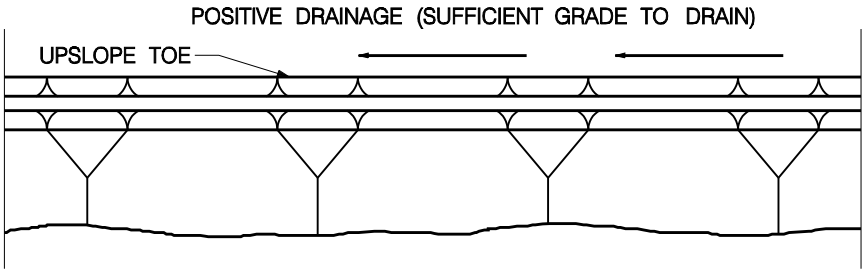
3. STRUCTURE THAT WILL CONTROL THE RUNOFF FROM DIKES SHALL BE INSTALLED AND STABILIZED BEFORE DIKES ARE INSTALLED.

GENERAL NOTES

1. ALL DIKES SHALL BE MACHINE COMPACTED.
2. FIELD LOCATION MAY BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
3. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.



CROSS SECTION



PLAN VIEW

PERIMETER DIKE
(NOT TO SCALE)

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

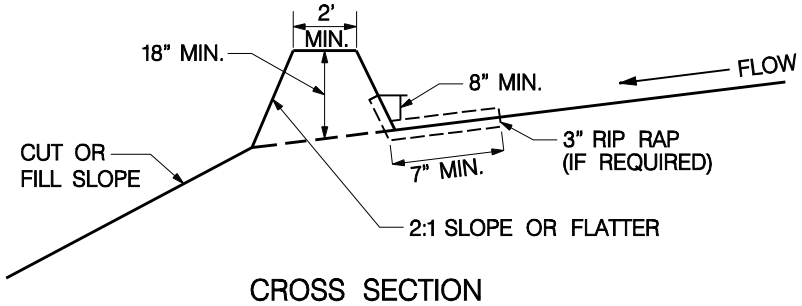
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

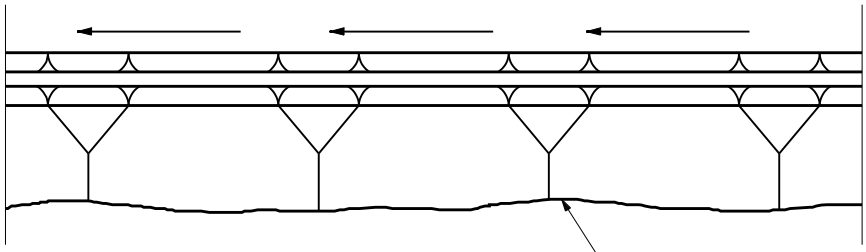
310–9

SHEET 9 OF 11



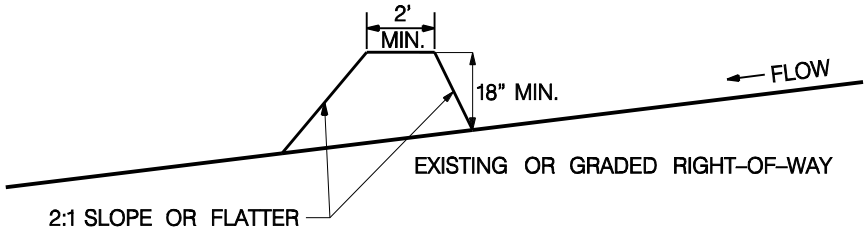
CROSS SECTION

POSITIVE DRAINAGE (SUFFICIENT GRADE TO DRAIN)

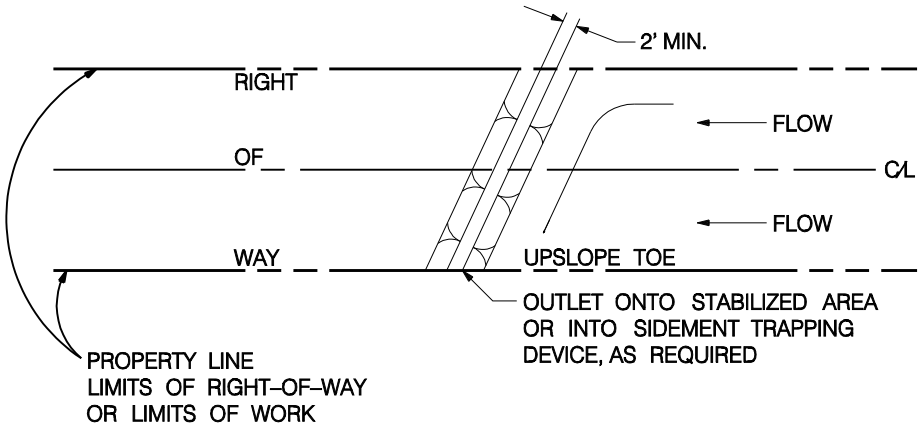


PLAN VIEW

DIVERSION DIKE
(NOT TO SCALE)



CROSS SECTION



PLAN VIEW

INTERCEPTOR DIKE
(NOT TO SCALE)

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ
APPROVED: REW
REVISED:

STANDARDS FOR HAY BALE DIKE

DEFINITION

A TEMPORARY BARRIER CONSTRUCTED WITH HAY BALES WITH A LIFE EXPECTANCY OF 3 MONTHS OR LESS, INSTALLED ACROSS OR AT THE TOE OF A SLOPE.

PURPOSE

A PURPOSE OF A HAY BALE DIKE IS TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM UNPROTECTED AREAS OF LIMITED EXTENT.

CONDITIONS WHERE PRACTICE APPLIES

THE HAY BALE DIKE IS USED WHERE:

1. NO OTHER PRACTICE IS FEASIBLE, AND
2. THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR OTHER DRAINAGE WAY ABOVE THE BARRIER AND
3. EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION, AND
4. CONTRIBUTING DRAINAGE AREA IS LESS THAN ONE–HALF ACRE AND THE LENGTH OF SLOPE ABOVE THE DIKE AND LESS THAN 100 FEET. THE PRACTICE MAY ALSO BE USED FOR ALONE, SINGLE FAMILY LOT IF THE SLOPE IS LESS THAN 15 PERCENT. THE CONTRIBUTING DRAINAGE AREA IN THIS INSTANCE SHALL BE LESS THAN 1 ACRE AND THE LENGTH OF SLOPE ABOVE THE DIKE SHALL BE LESS THAN 200 FEET.

DESIGN CRITERIA

A DESIGN IS NOT REQUIRED. ALL BALES SHALL BE PLACED ON THE CON–TOUR AND SHALL BE EITHER WIRE BOUND OR NYLON STRING TIED. SEE STANDARD DRAWING FOR HAY BALE DIKE FOR DETAILS.

GENERAL NOTES

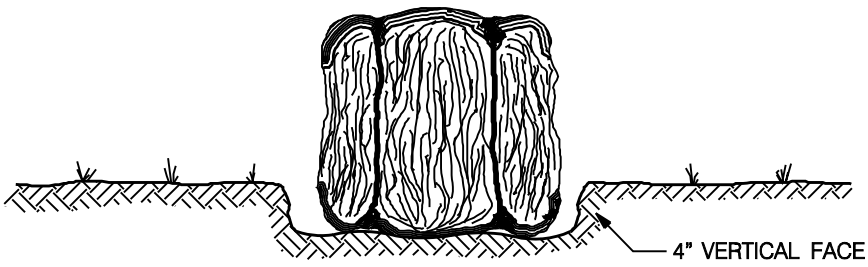
1. BALES SHALL BE PLACED IN A ROW WITH END TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL. A MINIMUM OF FOUR INCHES, WHERE POSSIBLE.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR REBARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BAIL TOGETHER.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY CONTRACTOR.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USE–FULLNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. *
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.

STANDARD PLAN

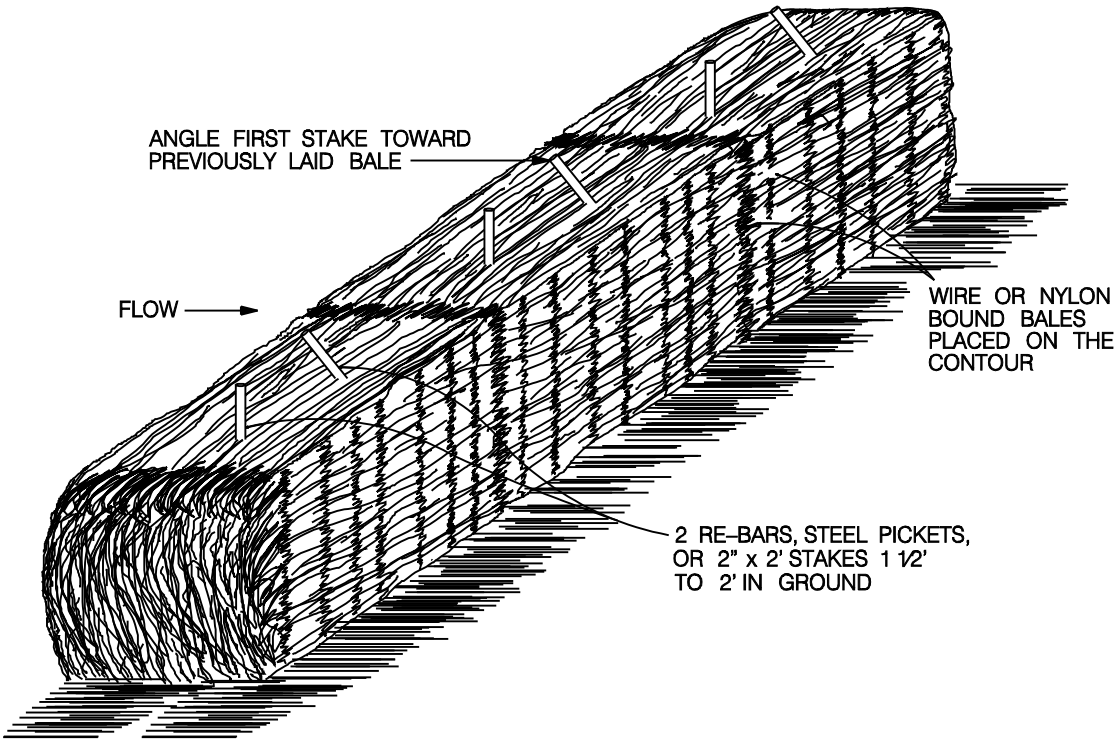
310–11

SHEET 11 OF 11

HAY BALE DIKE



EMBEDDING DETAIL



ANCHORING DETAIL

CITY OF SHREVEPORT

TEMPORARY EROSION CONTROL MEASURES

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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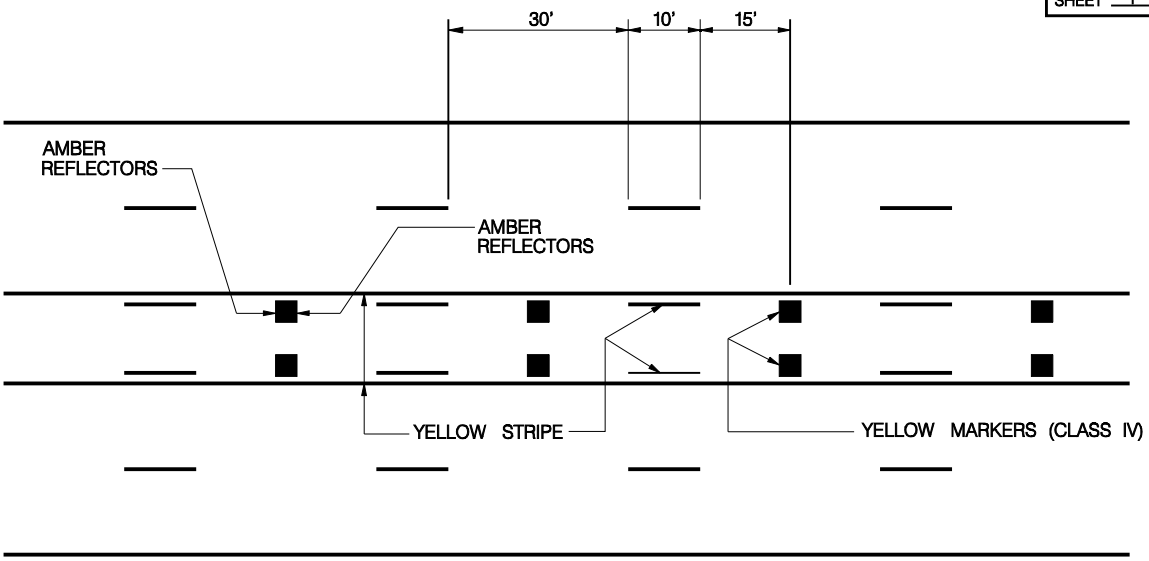
CHECKED: AZ.
APPROVED: REW
REVISED:

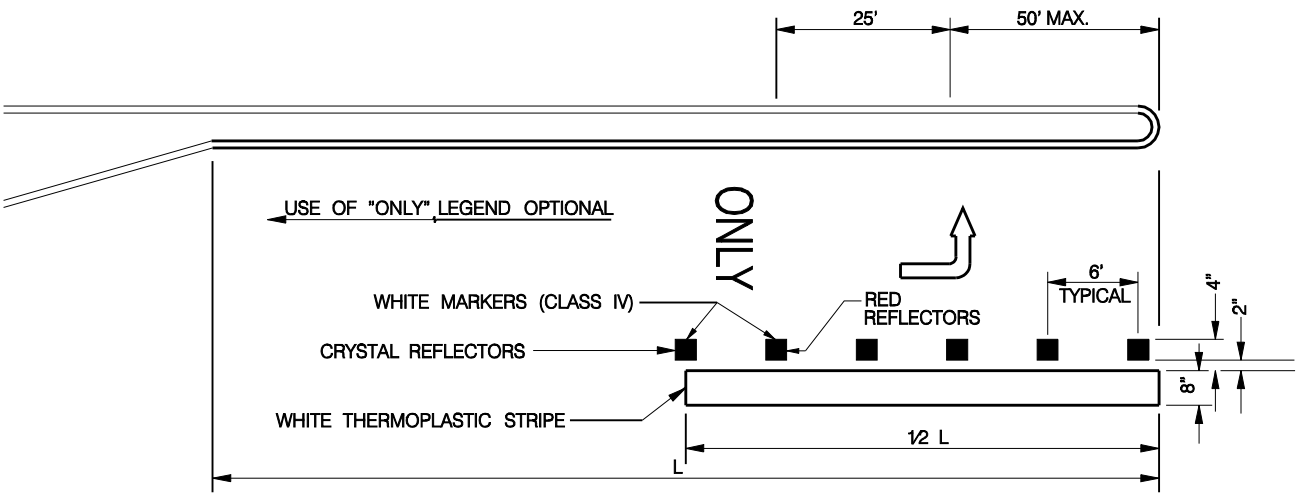
STANDARD PLAN

1301–1

SHEET 1 OF 7



MARKING FOR FIVE LANE SECTION



DETAIL OF TYPICAL LEFT TURN LANE SHOWING TRAFFIC MARKER PLACEMENT

(TRAFFIC MARKERS TO BE PLACED TO ADVOID LONGITUDINAL JOINT AS DIRECTED BY THE PROJECT ENGINEER)
ARROWS AND LEGEND WILL BE OF WHITE THERMOPLASTIC MATERIAL

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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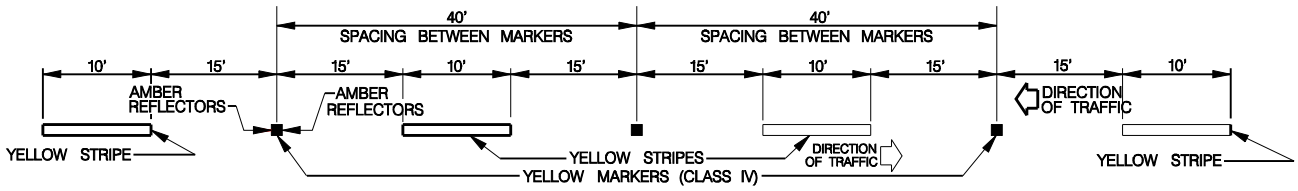
STANDARD PLAN

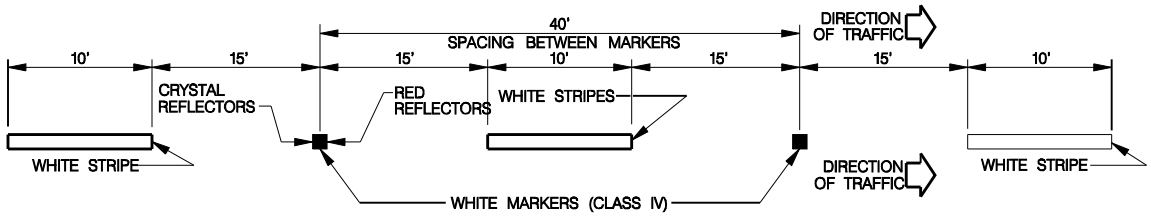
1301–2

SHEET 2 OF 7



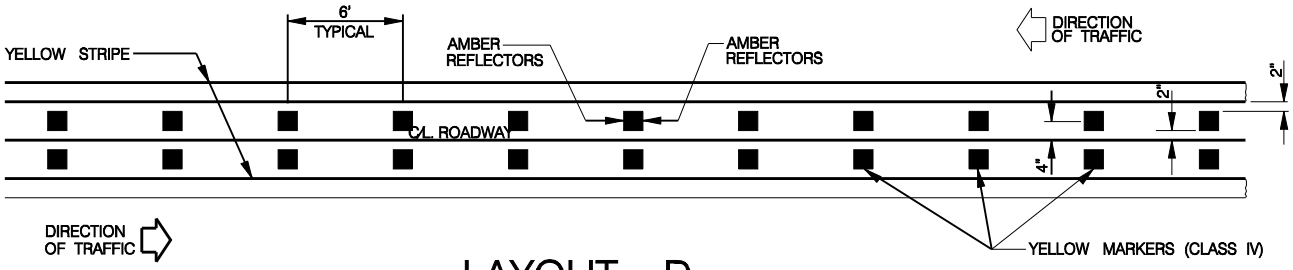
LAYOUT A

TO BE USED ALONG C/L. OF TWO–LANE ROADWAY WITH TWO–WAY TRAFFIC



LAYOUT B

TO BE USED ALONG LANE LINES FOR ONE–WAY TRAFFIC
IN RURAL AREAS, AND ON URBAN SECTIONS OF MULTI–LANE ROADWAYS



LAYOUT D

TO BE USED ALONG C/L. OF MULTI–LANE UNDIVIDED HIGHWAY

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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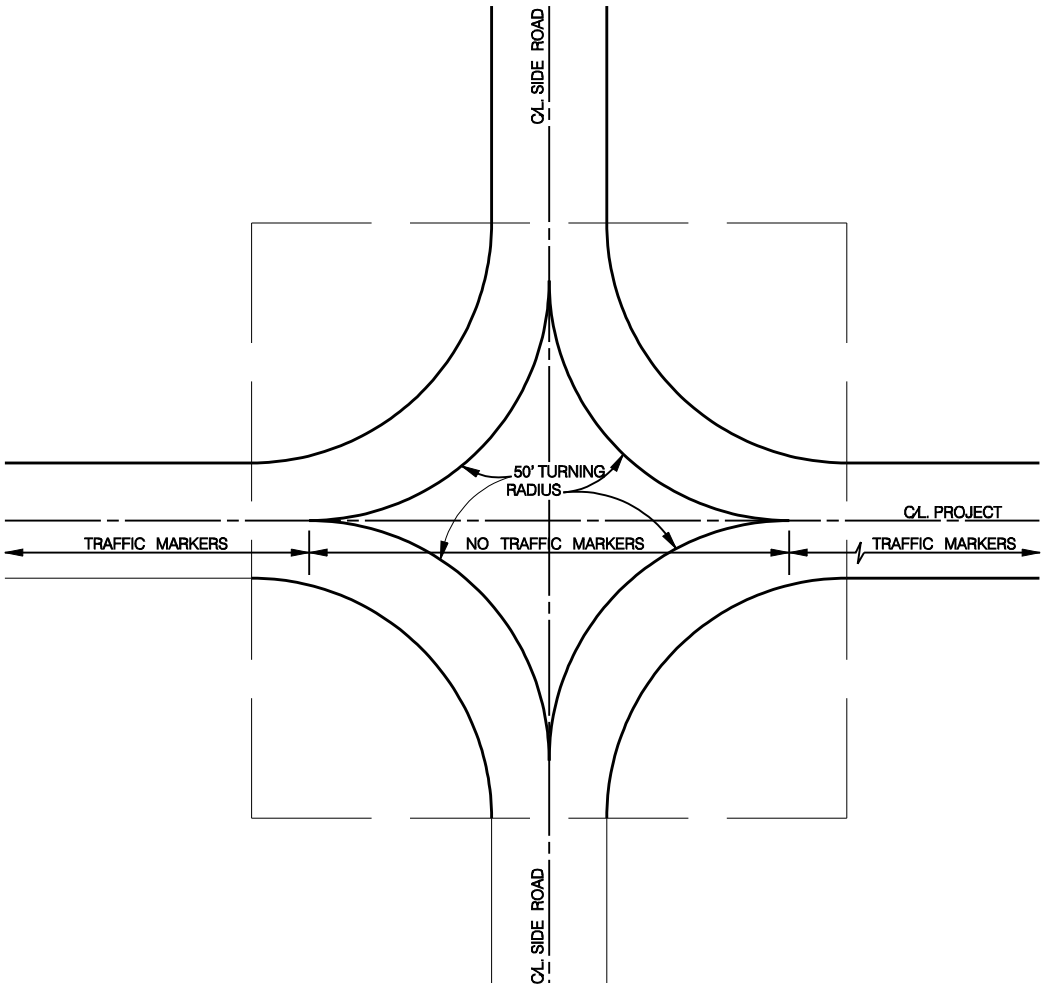
STANDARD PLAN

1301–3

SHEET 3 OF 7

NOTES :

- AT CHANNELIZED INTERSECTIONS TRAFFIC MARKERS ARE TO BE PLACED AS DIRECTED BY THE PROJECT ENGINEER AND AS APPROVED BY THE TRAFFIC AND PROGRAMS SECTION.
- ALL STRIPING TO BE THERMOPLASTIC MATERIAL.
- RAISED MARKERS SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO USE.



DETAIL OF TYPICAL INTERSECTION
SHOWING TRAFFIC MARKER PLACEMENT
FOR TWO – LANE HIGHWAY

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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STANDARD PLAN

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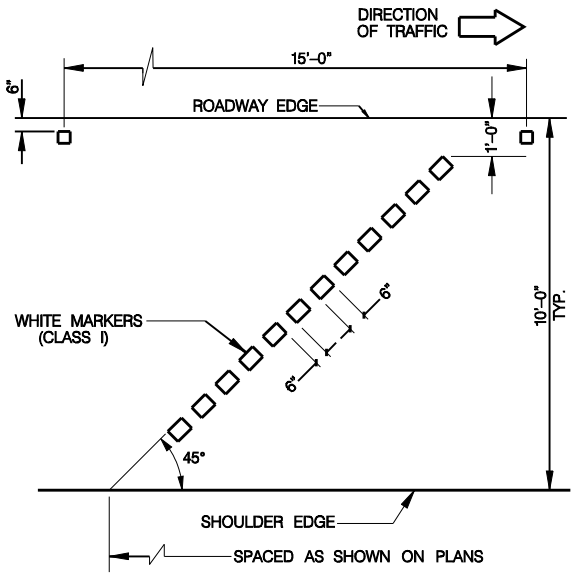
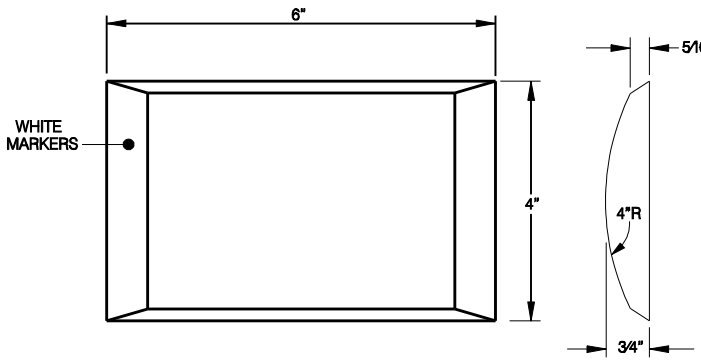
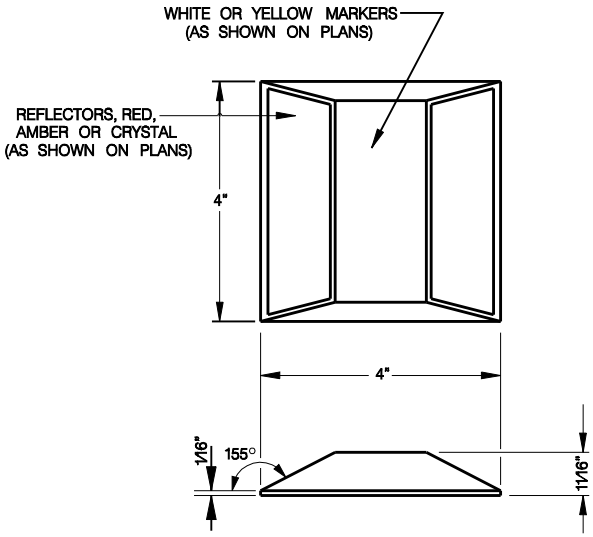
SHEET 4 OF 7



TYPICAL TRAFFIC MARKER PLACEMENT ALONG BRIDGE SHOULDER



4" x 6" NON – REFLECTORIZED TRAFFIC MARKER TYPICAL (CLASS I)



4" x 4" REFLECTORIZED TRAFFIC MARKER TYPICAL (CLASS IV)

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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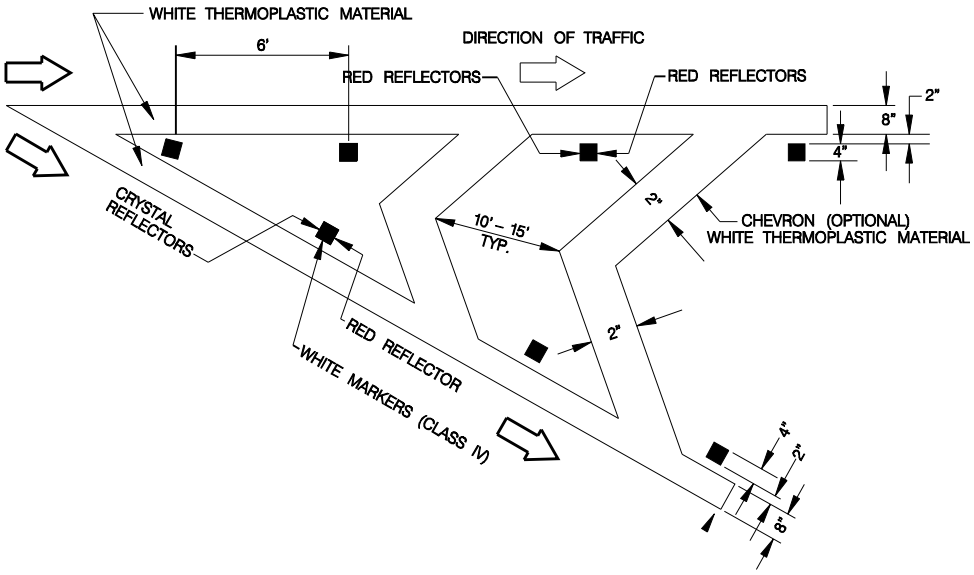
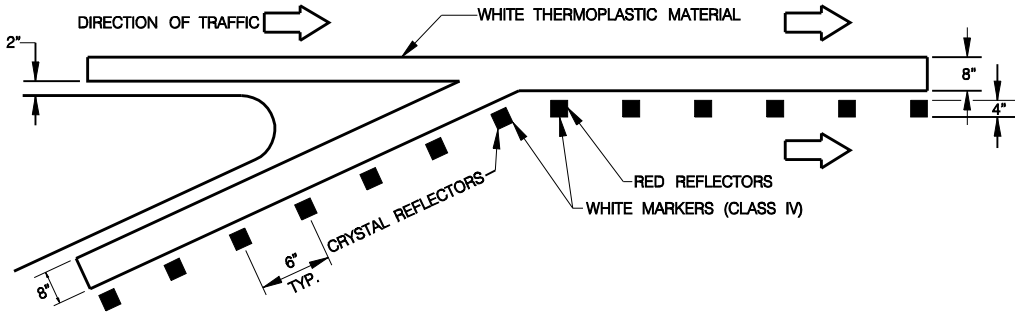
STANDARD PLAN

1301–5

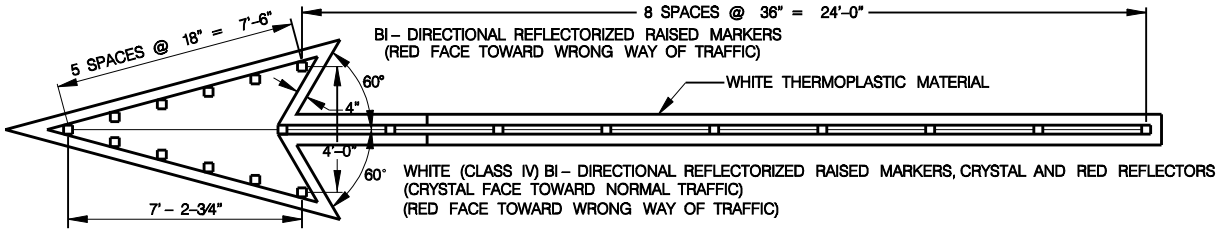
SHEET 5 OF 7



TYPICAL TRAFFIC MARKER PLACEMENT AT OFF – RAMP GORES



TYPICAL TRAFFIC MARKER PLACEMENT AT ON – RAMP GORES



ARROW DETAILS

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

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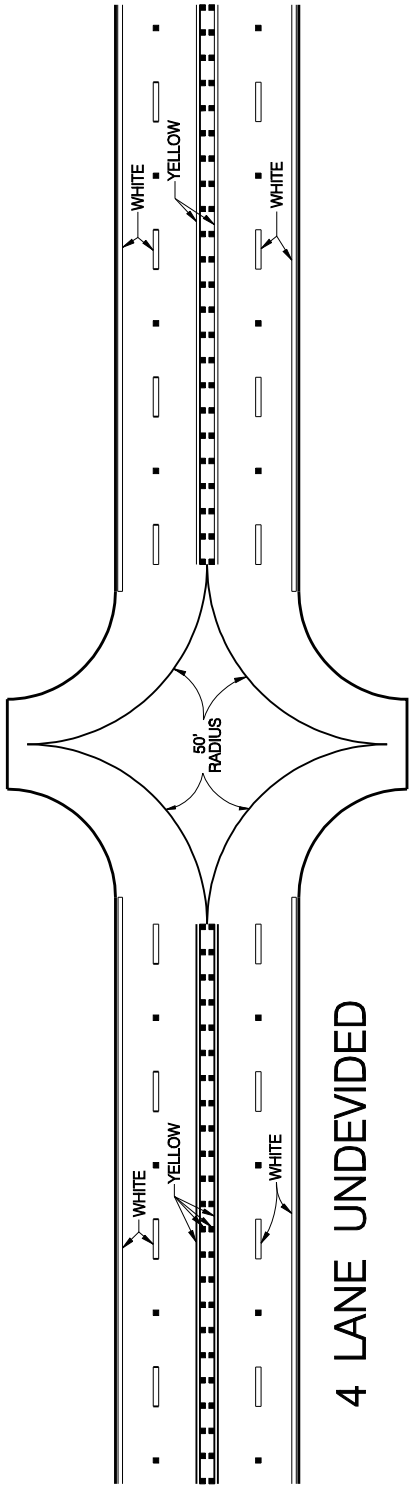
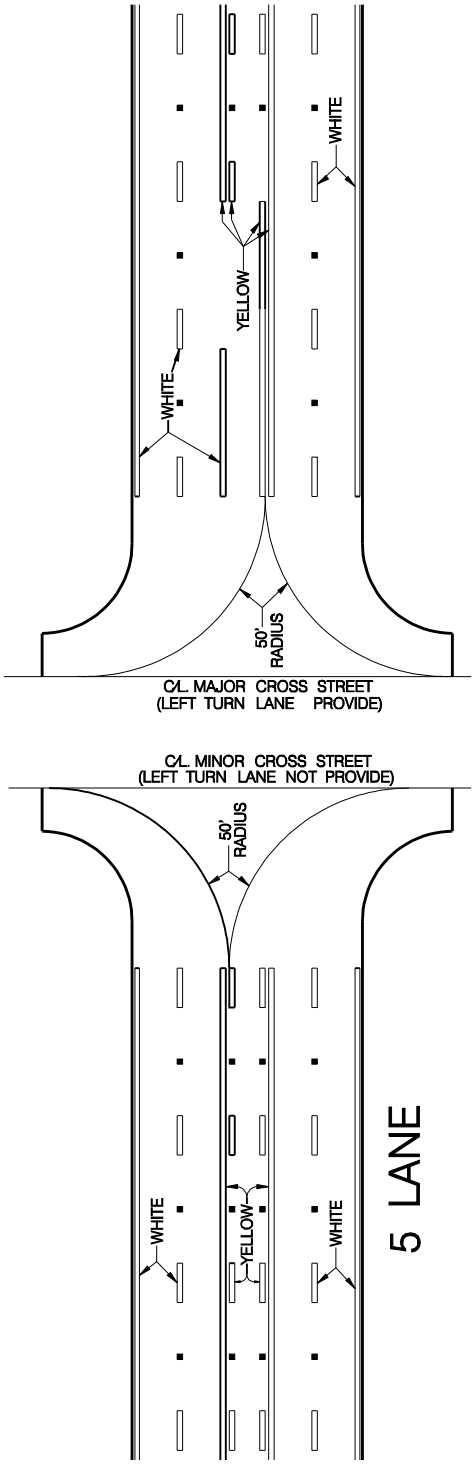
STANDARD PLAN

1301-6

SHEET 6 OF 7



4 LANE UNDEVIDED



5 LANE

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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STANDARD PLAN

1301–7

SHEET 7 OF 7

4 LANE DEVIDED

LEGEND :

INDICATES THERMOPLASTIC PAVEMENT STRIPING. TYPICAL WIDTH IS 4" UNLESS SHOWN OTHERWISE. FOR LONGITUDINAL DIMENSIONS AND SPACINGS SEE SHEET NO. 1, COLORS WILL BE AS SHOWN ON THIS SHEET.

INDICATES RAISED REFLECTORIZED PAVEMENT MARKERS. SEE SHEET NO. 1 OF 7 AND 2 FOR SPACINGS, COLORS AND DETAILS.

CITY OF SHREVEPORT

STREET STRIPING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED:

SHREVEPORT
CITY GOVERNMENT
AT YOUR SERVICE

SOUTHEAST SHREVEPORT WATER DISTRIBUTION SYSTEM IMPROVEMENTS PHASE III PROJECT NUMBER 05-E009

YOUR SUPPORT MADE THIS PROJECT POSSIBLE

CEDRIC B. GLOVER
MAYOR

Shreveport City Council

District A : Calvin Ben Lester Jr.
District B : R.M. "Monty" Walford
District C : Michael D. Long
District D : Brian K. Wooley
District E : Ron Webb
District F : Joe Shyne
District G : Joyce Bowman

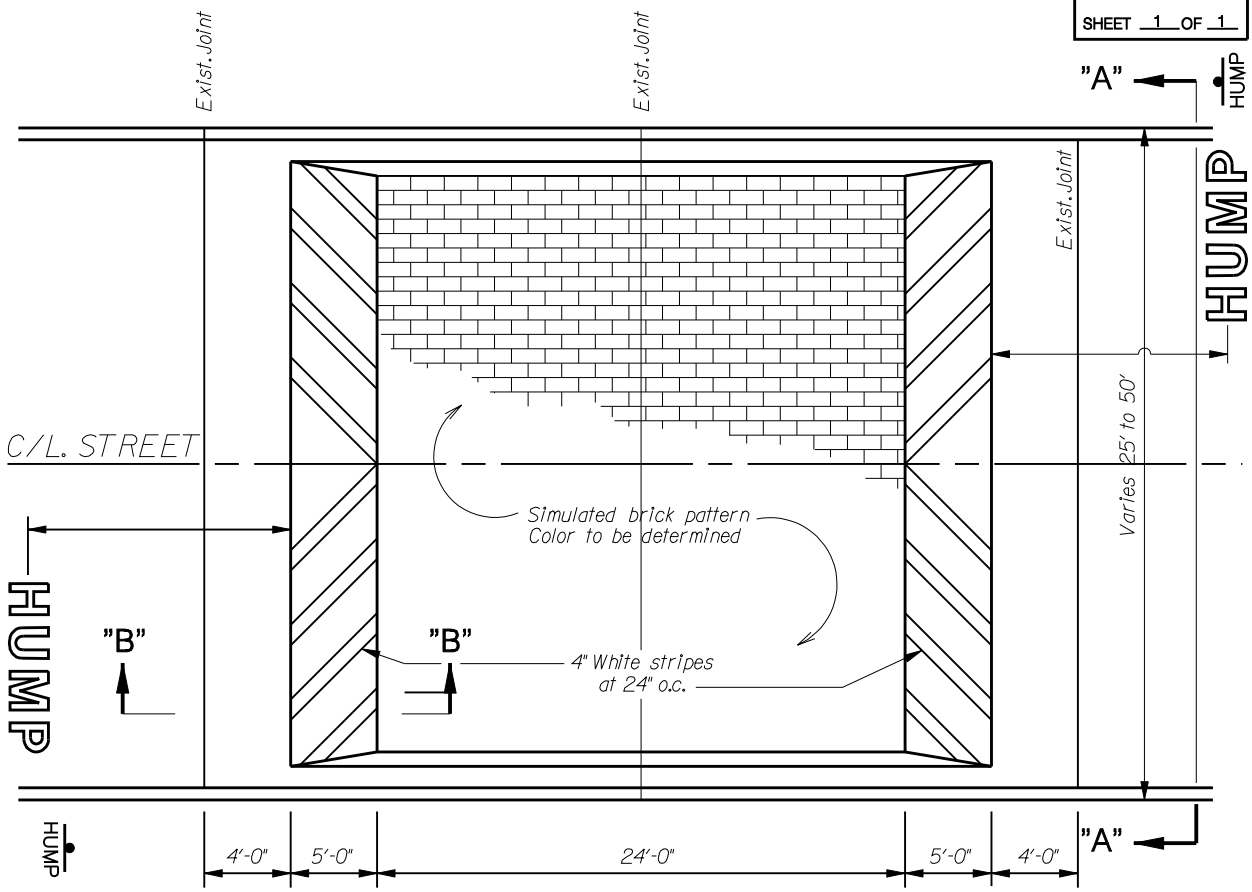
Contractor: McInnis Brothers Construction
Engineers: CDM, Inc.
Supervised By : DOS Engineering 673-6000

	CITY OF SHREVEPORT	STANDARD PLAN
	TYPICAL CONSTRUCTION PROJECTS BOARD	1301-8
	USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS	SHEET 1 OF 1

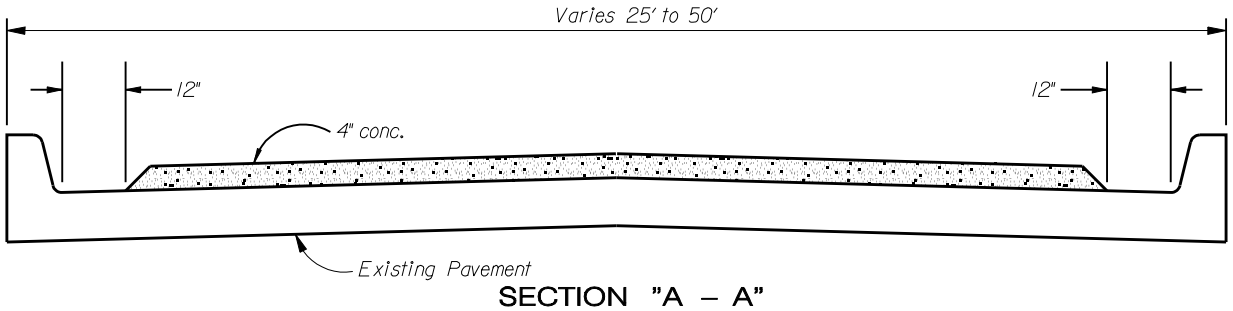
STANDARD PLAN

S-6

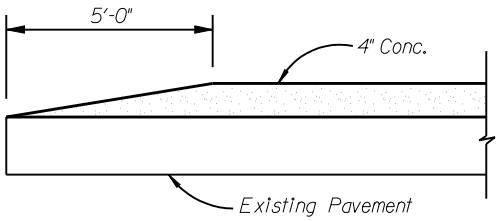
SHEET 1 OF 1



PLAN



SECTION "A – A"



SECTION "B – B"

CITY OF SHREVEPORT

STREET HUMP DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

APPROVED: REW

REVISED: _____

STANDARD PLAN

601–1

SHEET 1 OF 5

GENERAL NOTES

1. ALL CORNERS TO BE CHAMFERED 3⁄4".
2. RUBBED FINISH REQUIRED ON EXPOSED SURFACES.
3. REINFORCE CONCRETE SHALL BE CLASS "A" CONCRETE (3800 P.S.I. – 28 DAYS). PORLAND CEMENT SHALL CONFORM TO AASHO DESIGNATION M–85. REIF. BARS SHALL CONFORM TO A.S.T.M. DESIGNATION A–65 (GRADE 40).
4. STEEL IN FRAME AND COVER TO CONFORM TO A.S.T.M. DESIGNATION A–36 AS AMENDED TO DATE, AND SHALL BE GALVANIZED AFTER FABRICATION. GAVANIZING TO CONFORM TO A.S.T.M. A–123.
5. STEEL MESH TO CONFORM TO A.S.T.M. A–165.
6. BACKFILL TO BE COMPACTED TO 95% DENSITY.
7. INLET MAY BE CONSTRUCTED AS SINGLE UNIT OR IN MULTIPLES OF 2 AND 3 UNITS USING THE CONNECTING BEAM AS SHOWN IN DETAIL "A".
8. THE MINIMUM DISTANCE FROM THE TOP OF A PIPE ENTERING OR LEAVING THE INLET BOX SHALL BE 2'–6". FOR PIPE UNDER PAVEMENT (FRONT OF INLET BOX) AND 2'–0" FOR SIDES AND BACK OF THE INLET BOX.
9. STORM SEWER PIPE SHOULD BE INSTALLED BEFORE INTAKE SIDEWALL CONSTRUCTION IS STARTED. SIDEWALLS SHOULD BE CONSTRUCTED AS INDICATED WITH OPENINGS FOR STORM SEWER SMOOTHLY SHAPED AND NO INLET PIPES PROTECTING UNNECESSARILY INTO WELL OUTLET PIPE SHALL NOT PROJECT BEYOND INSIDE FACE OF SIDEWALL.
10. ALL REINFORCING STEEL SHALL BE 1–1⁄2" CLEAR OF CONCRETE SURFACE UNLESS OTHERWISE NOTED.
11. REINFORCING STEEL SHALL BE BENT AROUND PIPE OPENING WHEN POSSIBLE. IF STEEL IS CUT, A DIAGONAL BAR SHALL BE USED TO TIE ALL CUT END TOGETHER.
12. EXPANSION JOINT DETAIL AND DOWEL PLACEMENT SAME AS THAT SHOWN ON APPROPRIATE PAVEMENT AND CURB STANDARD PLANS.
13. A CONCRETE FILLET SHALL BE PLACED IN THE BOTTOM OF THE INTAKE APPROXIMATELY AS INDICATED AS DIRECTED BY THE CITY ENGINEER. SPECIAL SHAPING OF THIS FILLET IS REQUIRED TO PROVIDE A SMOOTH CHANNEL THROUGH THE INLET BOX. TOP SURFACE OF THE FILLETSHALL SLOPE APPROXIMATELY 1 INCH PER FOOT TOWARD THE CHANNEL.
14. STEPS SHALL BE PLACED OF 12" INTERWALS IN ALL STRUCTURES HAVING A DEPTH OF MORE THAN 4 FT. THE MINIMUM WIDTH SHALL BE 16" AND THE RUNG OR CLEAT SHALL BE 7" FROM THE FACE OF THE WALL. MATERIAL TO MEET SPECIFICATIONS FOR GRAY IRON CASTINGS, SA.S.T.M. DESIGNATION A–48, CLASS 25. MANHOLE STEP SHALL BE PAINTED WITH AN ASPHALT BASE PAINT IN CONFORMANCE WITH U.S.A. STANDARD A21. 10–8.
15. NO SCALE, FOLLOW DIMENSIONS.

CITY OF SHREVEPORT

CATCH BASIN AND
48" STANDARD INLET

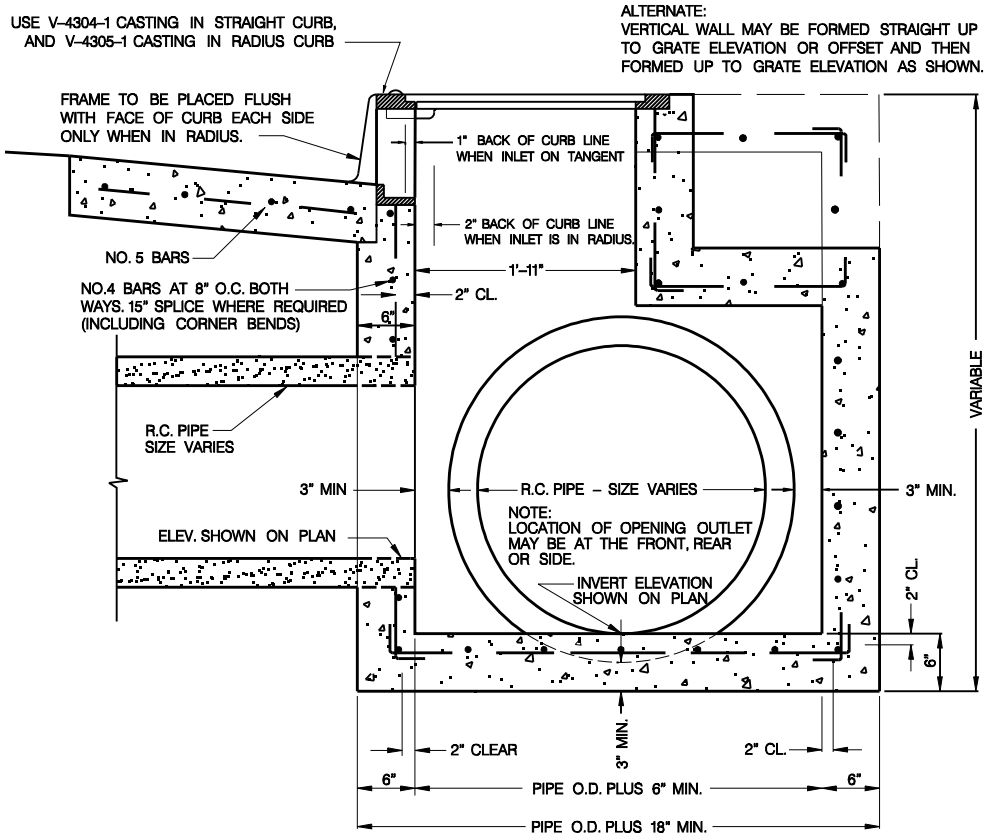
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A Z.
REVISED:
REW
REVISED:

STANDARD PLAN

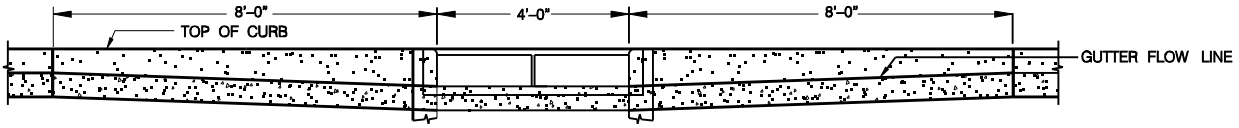
601–2

SHEET 2 OF 5



INLET SECTION B–B

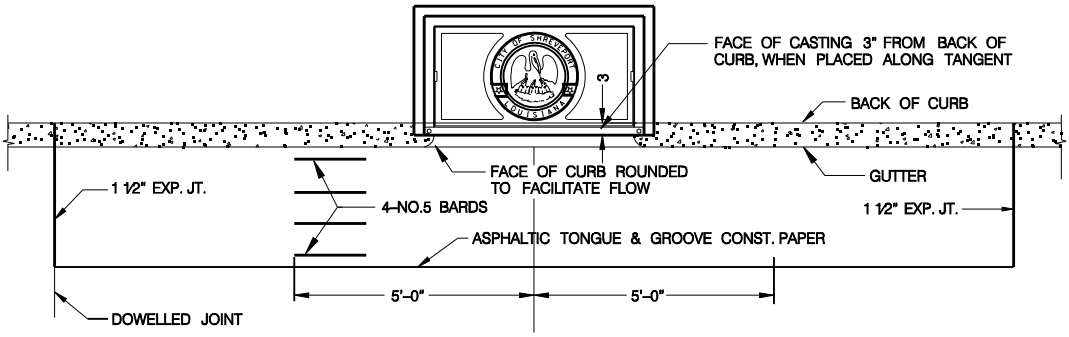
NOT TO SCALE



ELEVATION

(SHOWING MANNER OF PLACING)

NOT TO SCALE



PLAN

NOT TO SCALE

NOTES :

STEPS OF APPROVED DESIGN AT 1'–0" O.C. IF REQUIRED.

CASTINGS SHALL BE UNCOATED.

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CATCH BASIN AND 48" STANDARD INLET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: A Z.

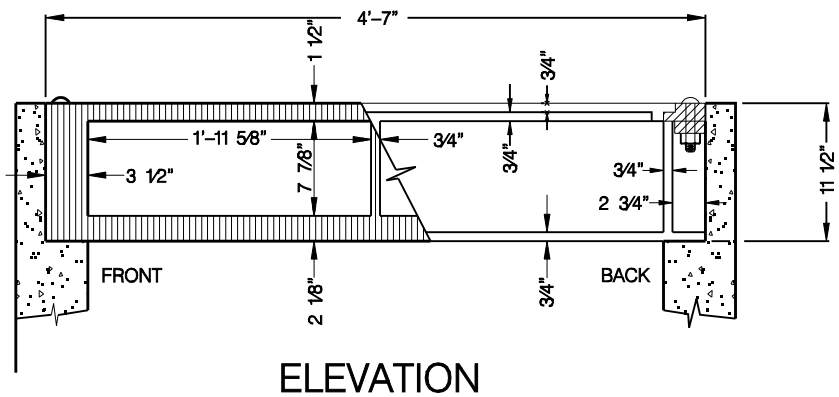
APPROVED: REW

REVISED:

STANDARD PLAN

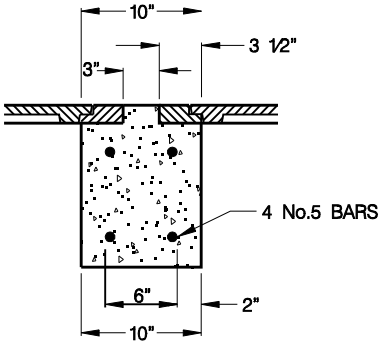
601–3

SHEET 3 OF 5



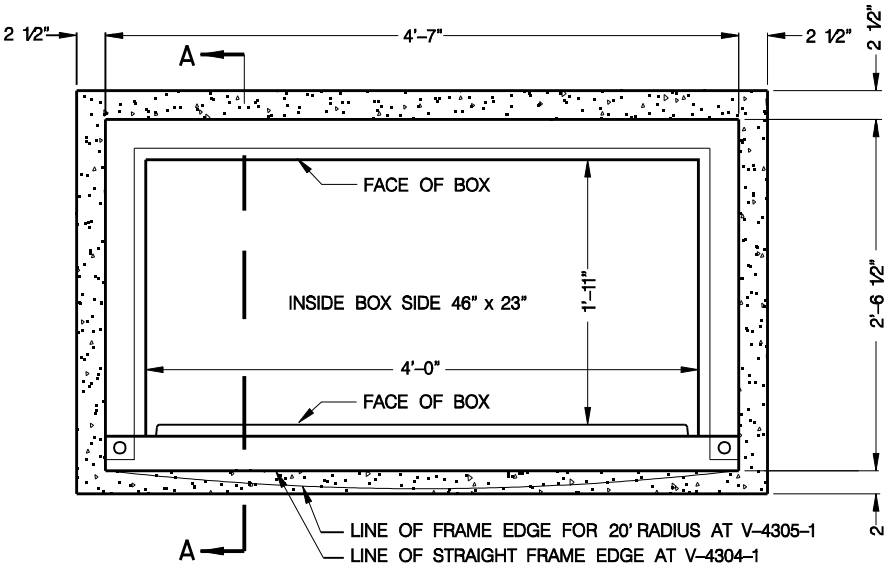
ELEVATION

NOT TO SCALE



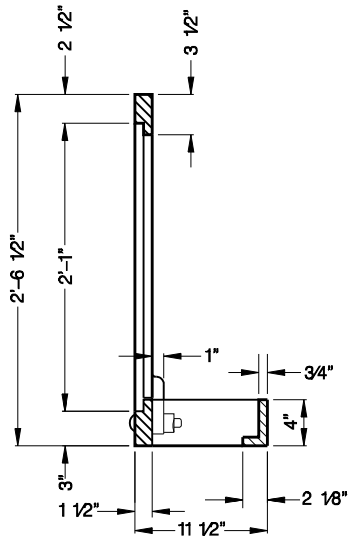
CONNECTING BEAM
FOR MULTIPLE INLETS

NOT TO SCALE



INLET PLAN

NOT TO SCALE



FRAME SECTION A – A

NOT TO SCALE

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CATCH BASIN AND 48" STANDARD INLET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: A Z.

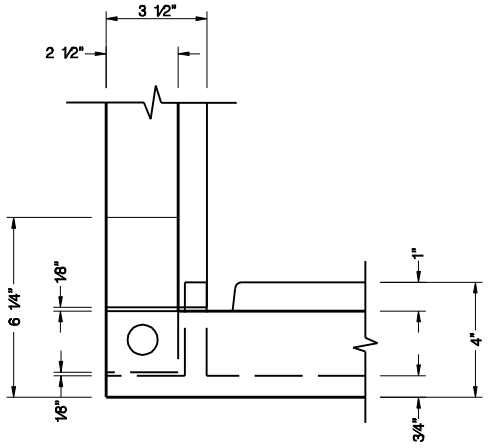
APPROVED: REW

REVISED:

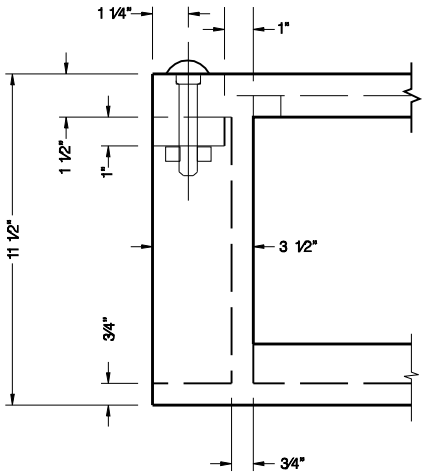
STANDARD PLAN

601–4

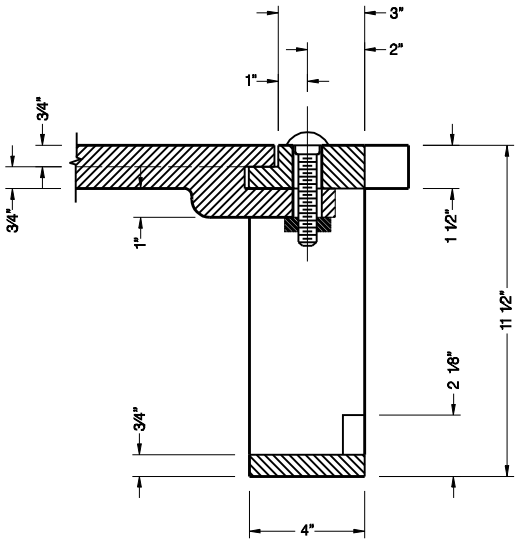
SHEET 4 OF 5



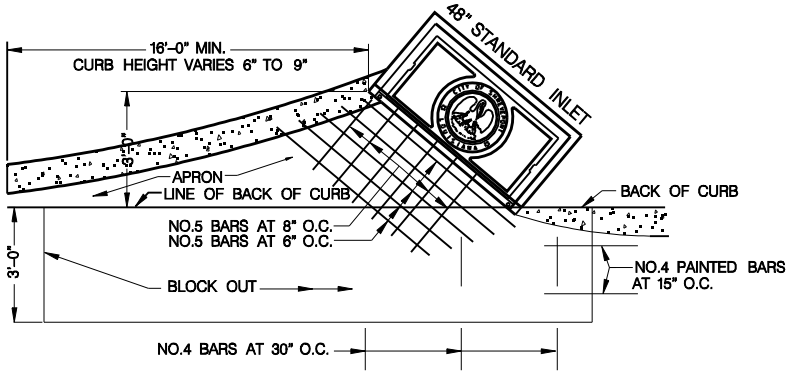
FRAME DETAIL – PLAN
NOT TO SCALE



FRAME DETAIL – ELEVATION
NOT TO SCALE



FRAME DETAIL – SECTION
NOT TO SCALE



SKEWED INLET DETAIL
NOT TO SCALE

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CATCH BASIN AND 48" STANDARD INLET

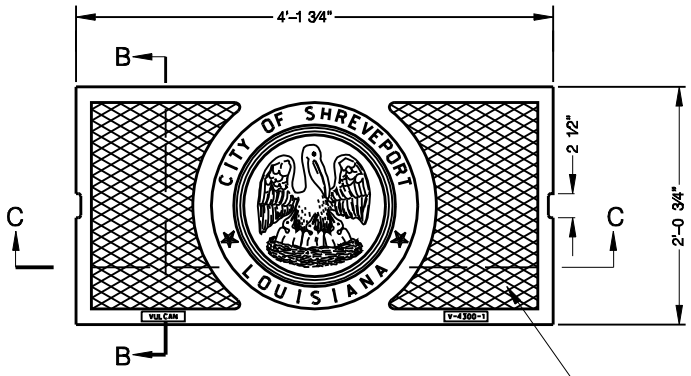
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A Z.
APPROVED: REW
REVISED:

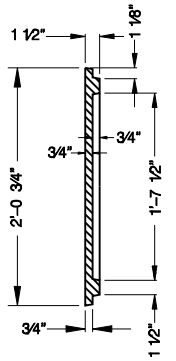
STANDARD PLAN

601–5

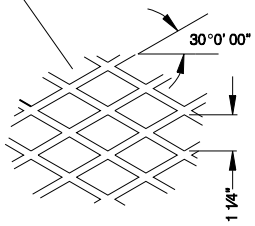
SHEET 5 OF 5



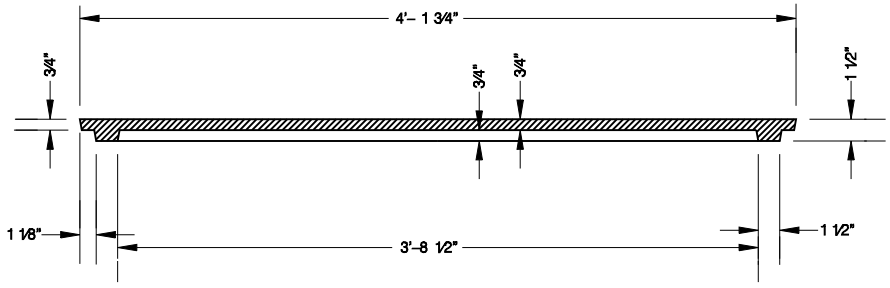
COVER TOP VIEW
NOT TO SCALE



COVER SECTION B – B
NOT TO SCALE



TYPICAL PATTERN
NOT TO SCALE



CROSS SECTION C – C
NOT TO SCALE

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CATCH BASIN AND 48" STANDARD INLET

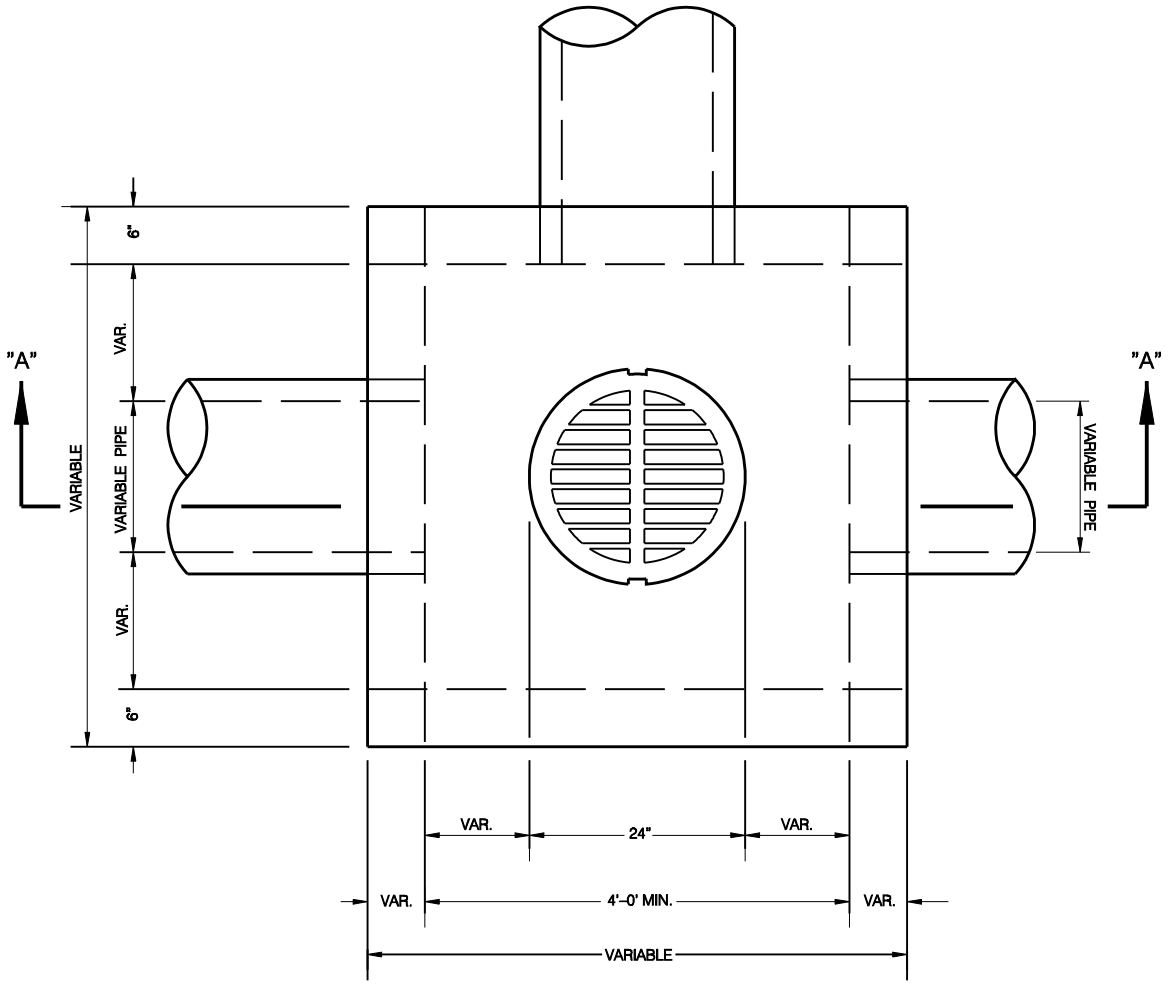
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A. Z.
APPROVED: REW
REVISED:

STANDARD PLAN

601–6

SHEET 1 OF 2



NOTE : GRATE INLETS TYPE "A" AND TYPE "B" TO ACCOMMODATE ONE (1) TO FOUR (4) STORM DRAINAGE PIPES. (SEE DETAIL SECTION "A – A" ON SHEET NO. 2 OF 7).

PLAN
GRATE INLET TYPE "A"

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

GRATE INLET TYPE A
(FOR ROADWAY USE ONLY)

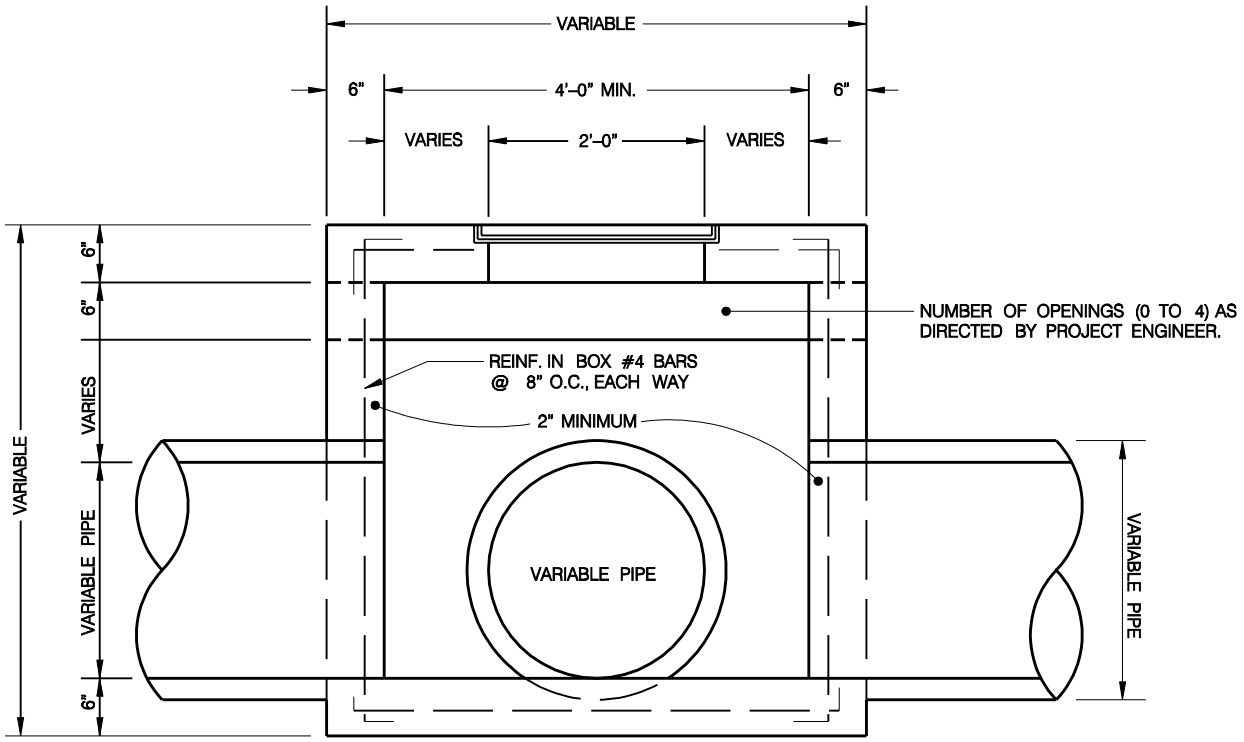
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A Z.
APPROVED: REW
REVISED:

STANDARD PLAN

601–7

SHEET 2 OF 2



SECTION "A – A"

CITY OF SHREVEPORT

GRATE INLET TYPE A
(FOR ROADWAY USE ONLY)

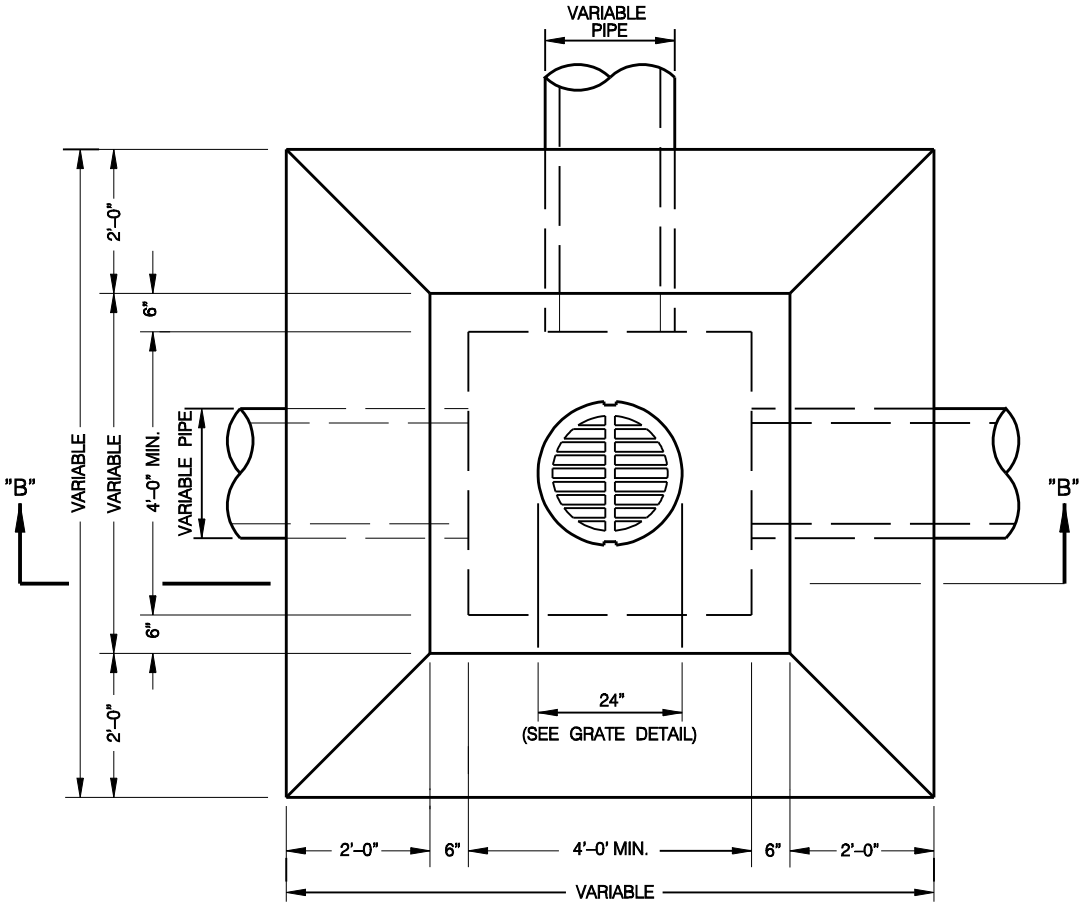
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A Z.
APPROVED: REW
REVISED:

STANDARD PLAN

601–8

SHEET 1 OF 2



NOTE : SEE DETAIL SECTION "B – B" ON SHEET NO. 2 OF 2 (201–4)

PLAN
GRATE INLET TYPE "B"

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

GRATE INLET TYPE B
(OFF ROADWAY USE ONLY)

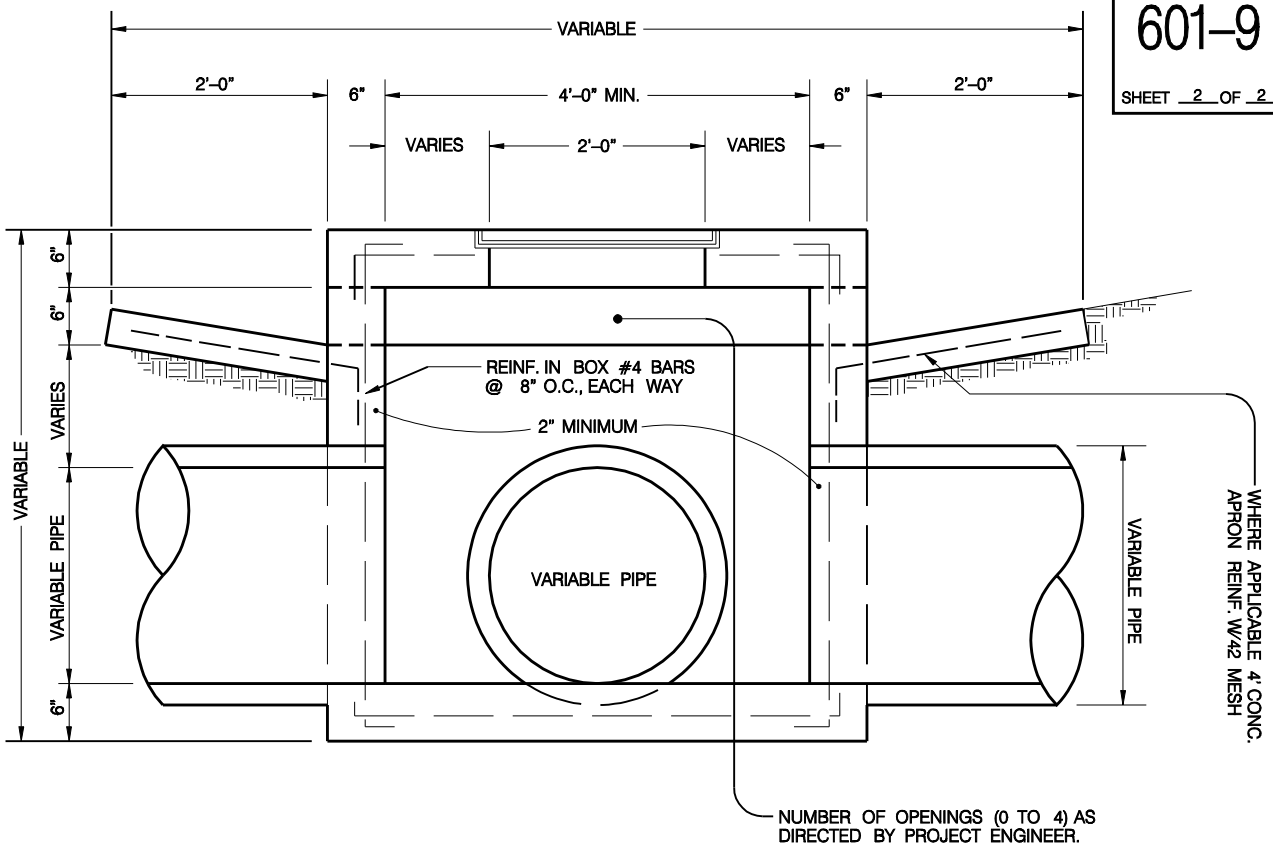
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: A Z.
APPROVED: REW
REVISED:

STANDARD PLAN

601-9

SHEET 2 OF 2



SECTION "B – B"

NOTES :

1. ALL CORNERS TO BE CHAMFERED 3/4".
2. RUBBED FINISH REQUIRED ON EXPOSED SURFACES.
3. R.C. CATCH BASIN SHALL CONFORM TO A.A.S.H.O. DESIGNATION M-85 CLASS A CONCRETE (3800 P.S.I. - 28 DAYS) PORTLAND CEMENT.
4. 24' ROUND C.I. FRAME AND LID BITUMINOUS COATED.
5. REINFORCE BARS SHALL CONFORM TO A.S.T.M. DESIGNATION A-615 (GRADE 40).
6. STEEL MESH TO CONFORM TO A.S.T.M. A-185.
7. GRATES TO BE CENTERED.
8. BACKFILL TO BE COMPACTED TO 95% DENSITY.

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

GRATE INLET TYPE B (OFF ROADWAY USE ONLY)

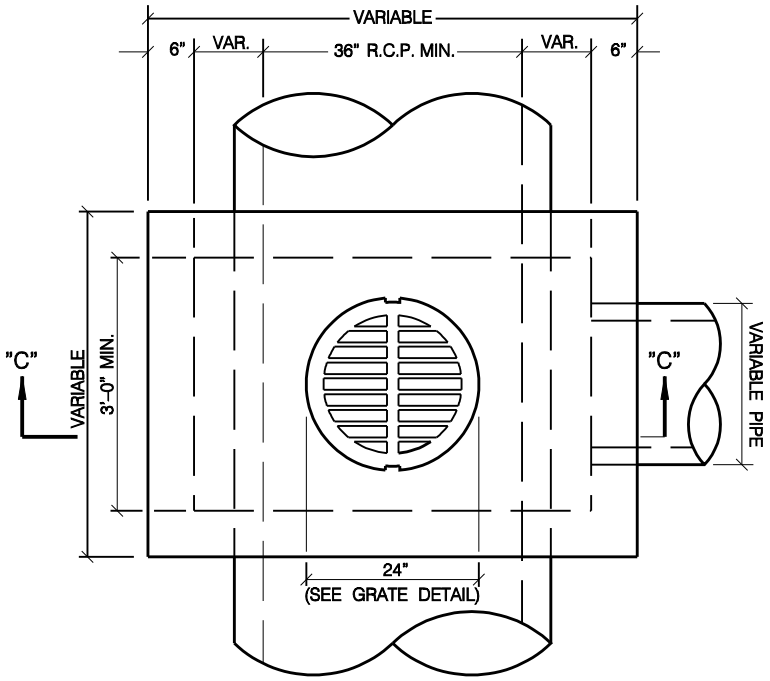
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

601–10

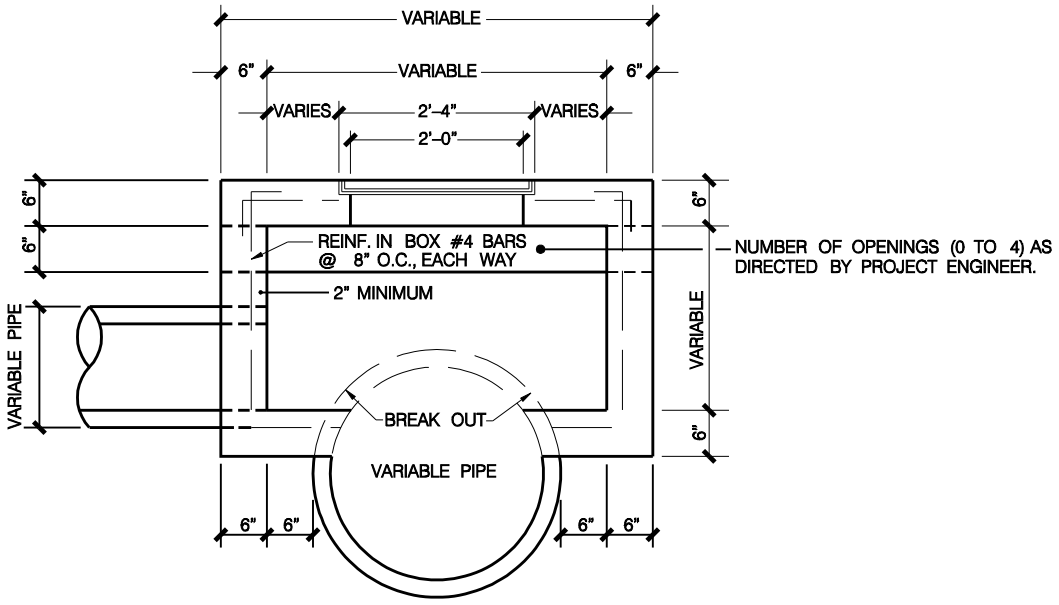
SHEET 1 OF 1



NOTE : TYPE "C" INLET TO BE USED WITH REINFORCE CONCRETE PIPE ONLY.

SEE TYPE "B" FOR CONCRETE APRON IF REQUIRED BY PROJECT ENGINEER.

PLAN
GRATE INLET TYPE "C"



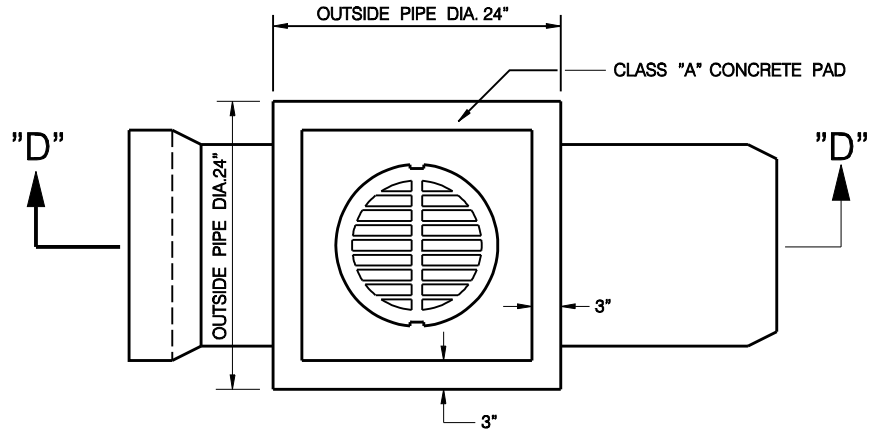
SECTION " C – C "

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES	CITY OF SHREVEPORT GRATE INLET TYPE C (OFF ROADWAY USE ONLY) USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS	DRAWN: Nhan Tran CHECKED: AZ. APPROVED: REW REVISED:

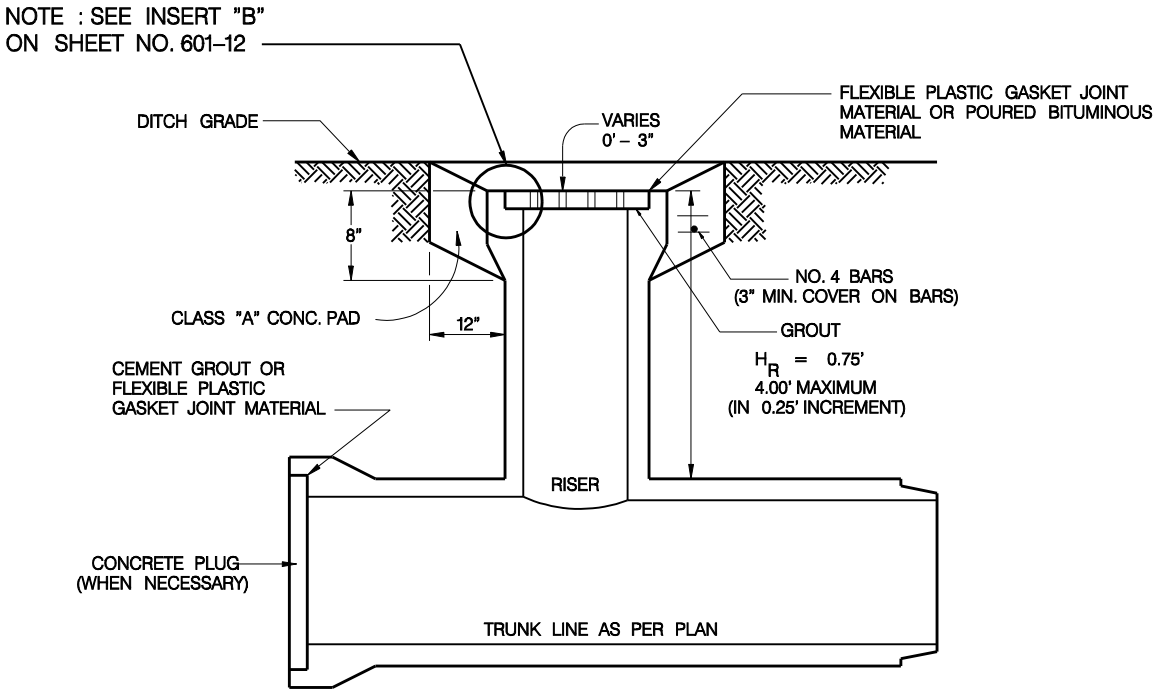
STANDARD PLAN

601–11

SHEET 1 OF 2



PLAN
GRATE INLET TYPE "D"



SECTION " D – D "

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

GRATE INLET TYPE D
(OFF ROADWAY USE ONLY)

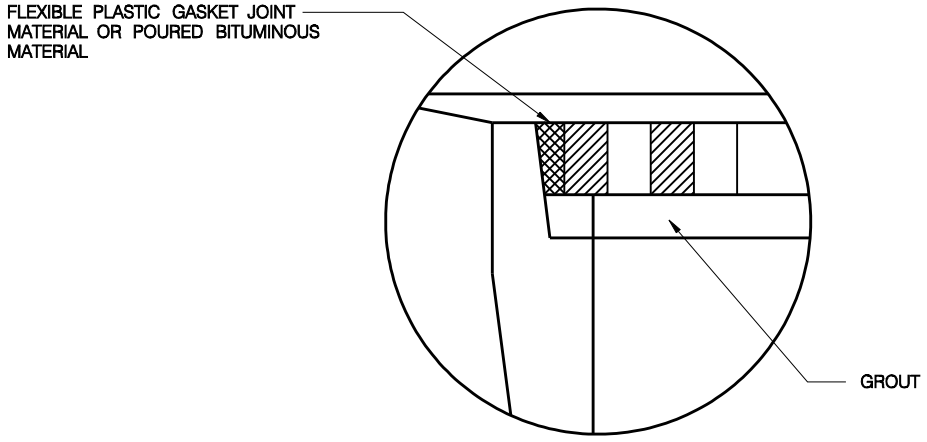
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

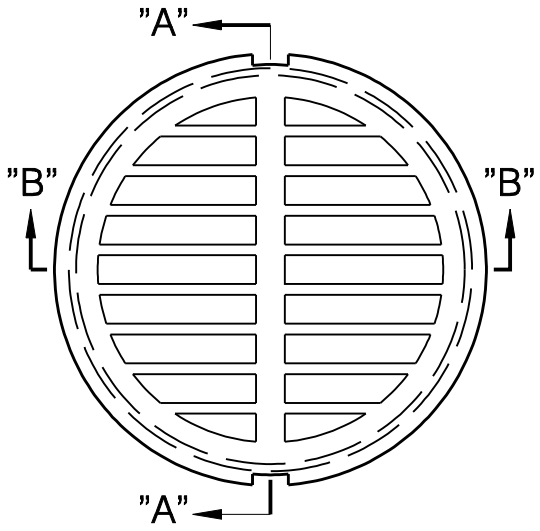
STANDARD PLAN

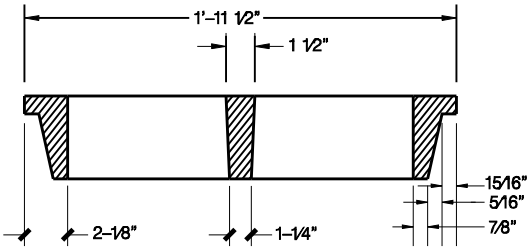
601–12

SHEET 2 OF 2

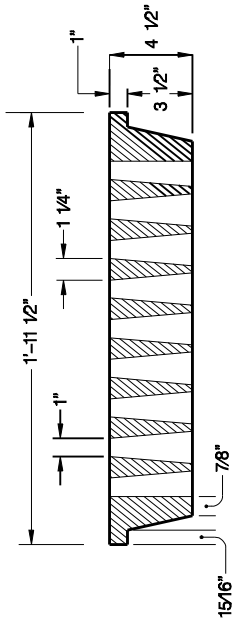


INSERT "B"





SECTION " B – B "



SECTION " A – A "

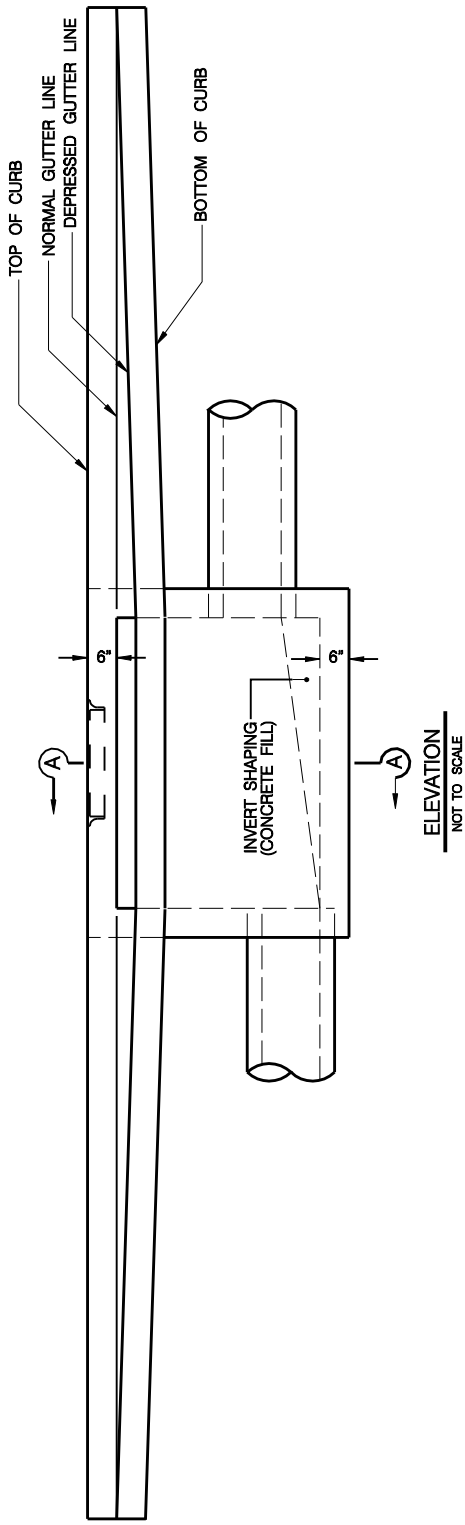
DETAIL OF (L.D.H. – H20) C.I. GRATE TYPE COVER

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES	CITY OF SHREVEPORT GRATE INLET TYPE D (OFF ROADWAY USE ONLY) USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS	DRAWN: Nhan Tran CHECKED: AZ. APPROVED: REW REVISED:

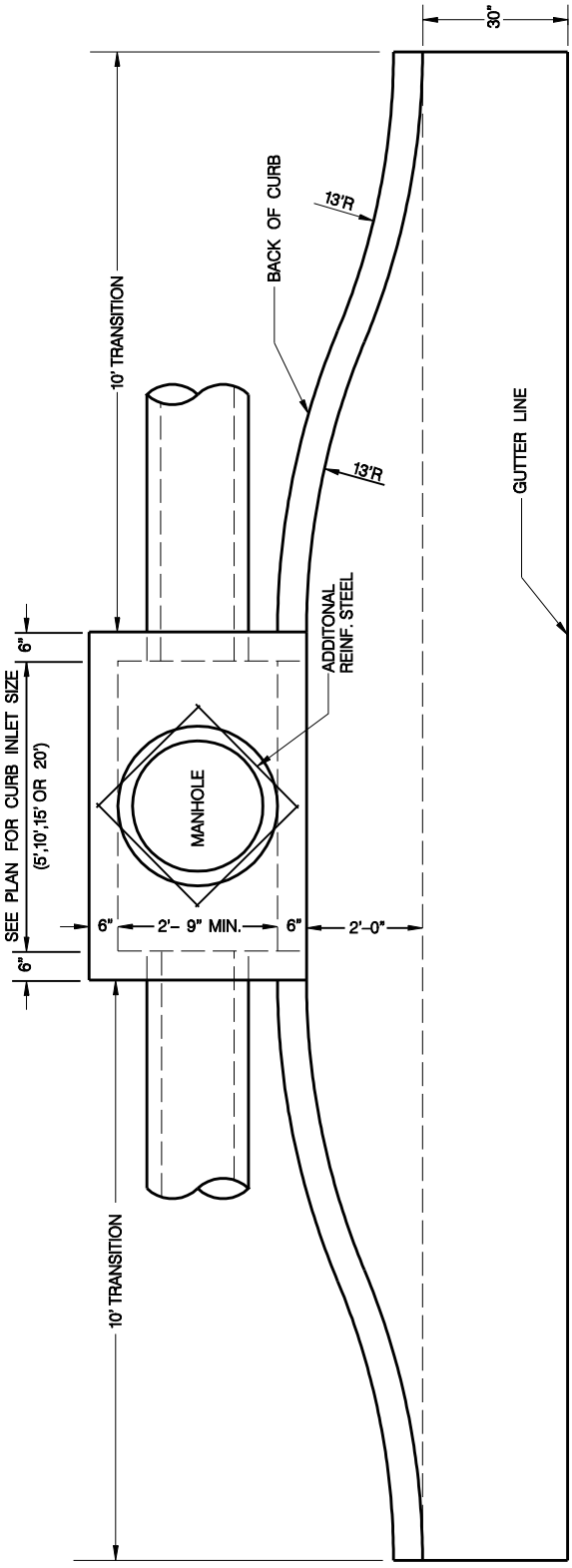
STANDARD PLAN

601–13

SHEET 1 OF 3



ELEVATION
NOT TO SCALE



PLAN
NOT TO SCALE

CITY OF SHREVEPORT

RECESSED INLET

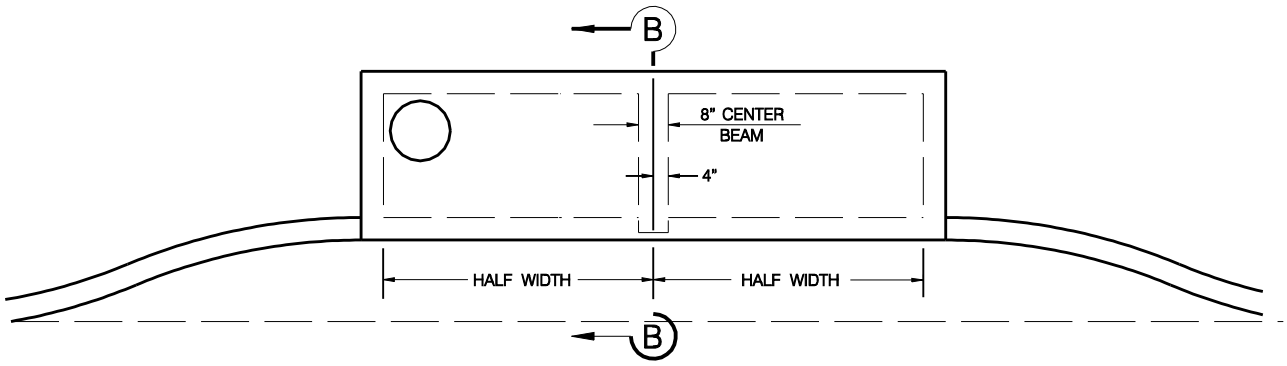
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

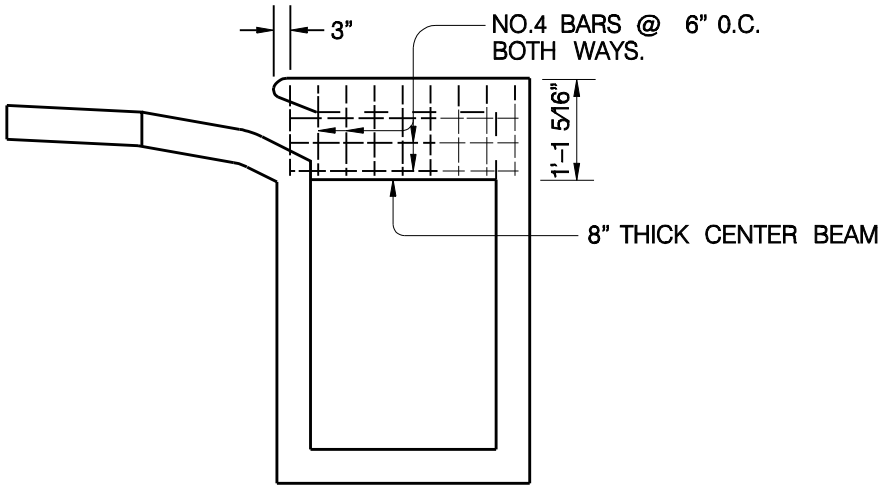
601–14

SHEET 2 OF 3



P L A N

NOT TO SCALE



SECTION "B – B"

CENTER BEAM FOR 15' AND 20' INLETS

NOT TO SCALE

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

RECESSED INLET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

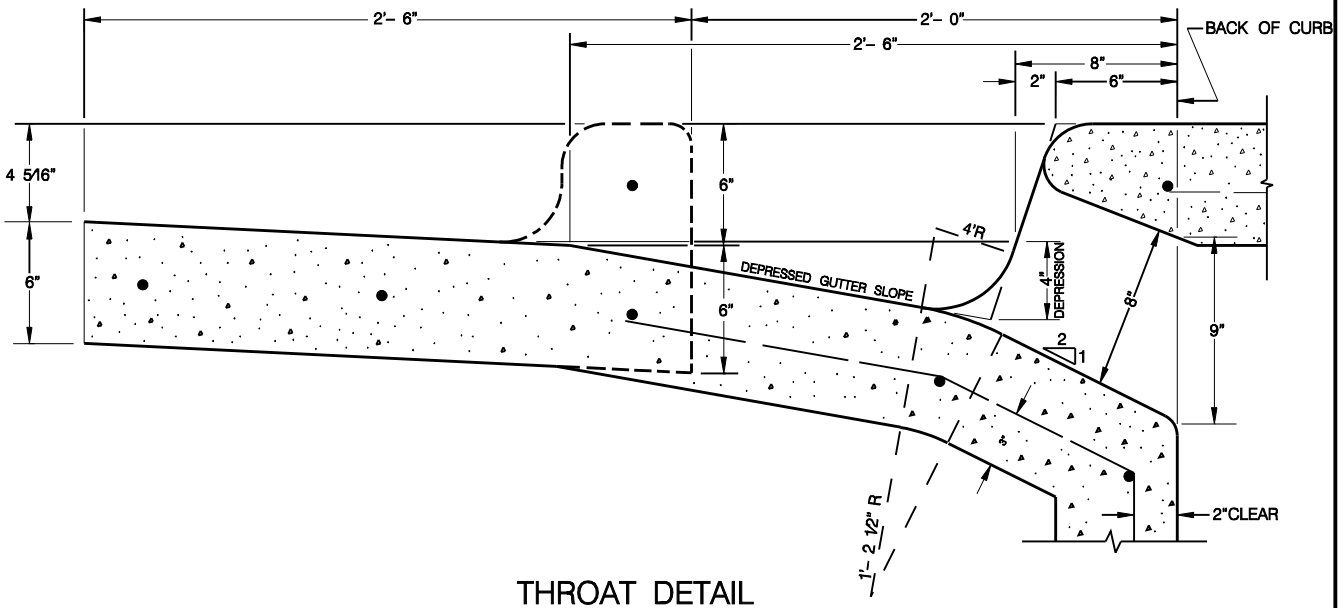
APPROVED: REW

REVISED:

STANDARD PLAN

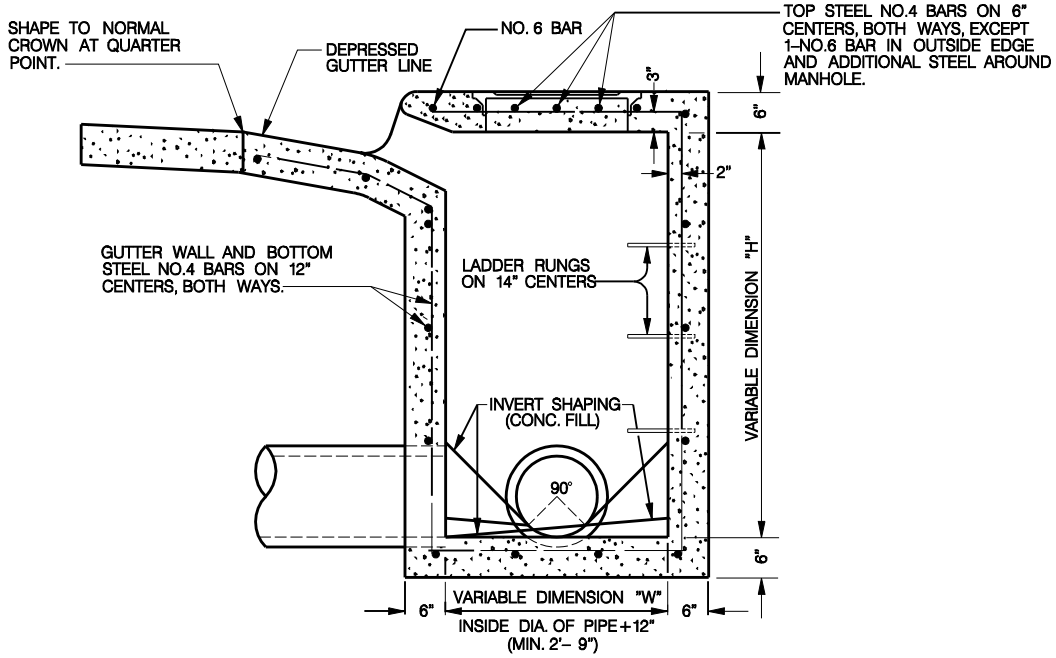
601–15

SHEET 3 OF 3



THROAT DETAIL

NOT TO SCALE



SECTION "A – A"

NOT TO SCALE

CITY OF SHREVEPORT

RECESSED INLET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

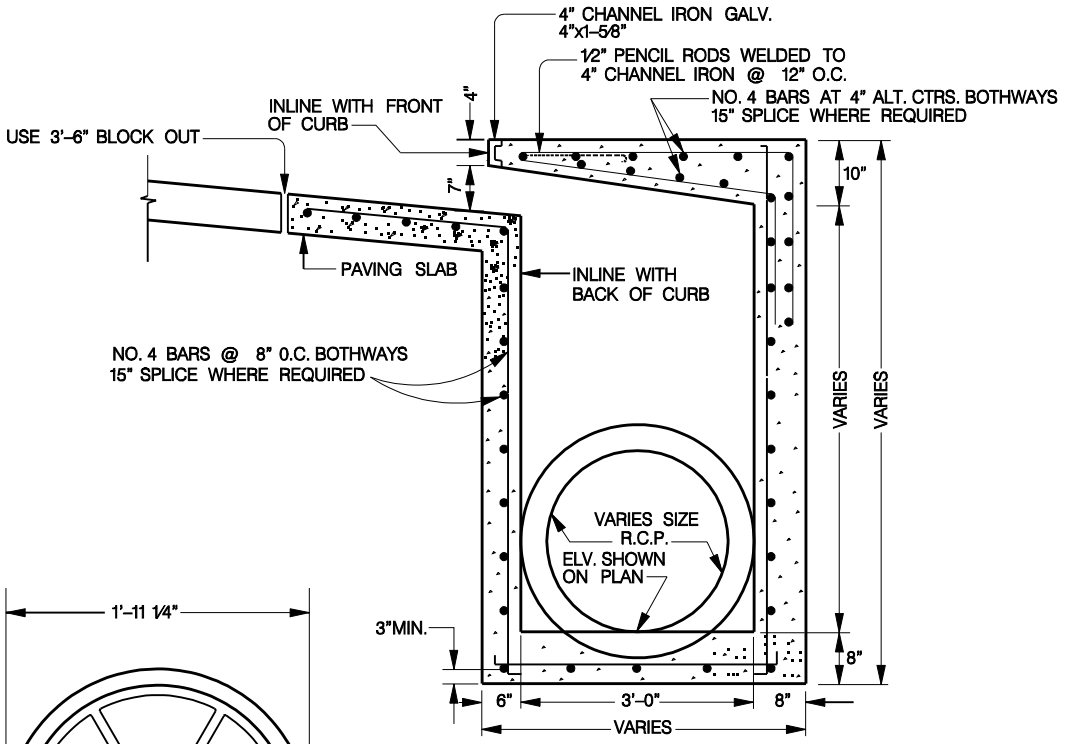
APPROVED: REW

REVISED:

STANDARD PLAN

601–16

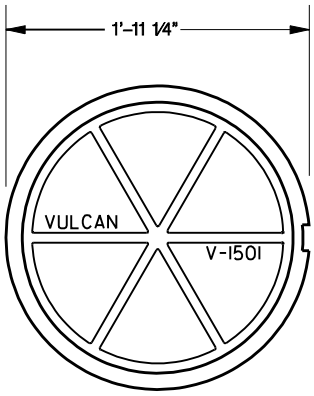
SHEET 1 OF 2



* NOTE : CONCRETE (CLASS A) TO BE VIBRATED

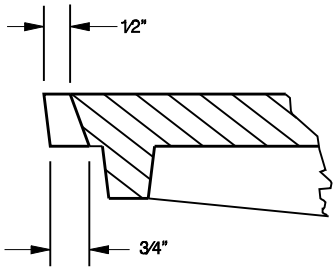
SECTION "A – A"

NOT TO SCALE

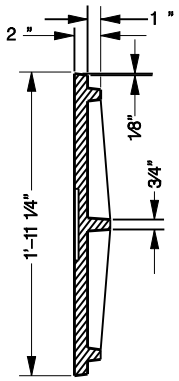


COVER BACK

COVER FACE



PICKHOLE DET.



COVER SECTION

DETAILS OF C.I. COVER

VULCAN V–1501 COVER OR APPROVED EQUAL
USED WITH V–1886 FRAME FOR V–1886 SET.

CITY OF SHREVEPORT

SPECIAL INLET CANTILEVER THROAT

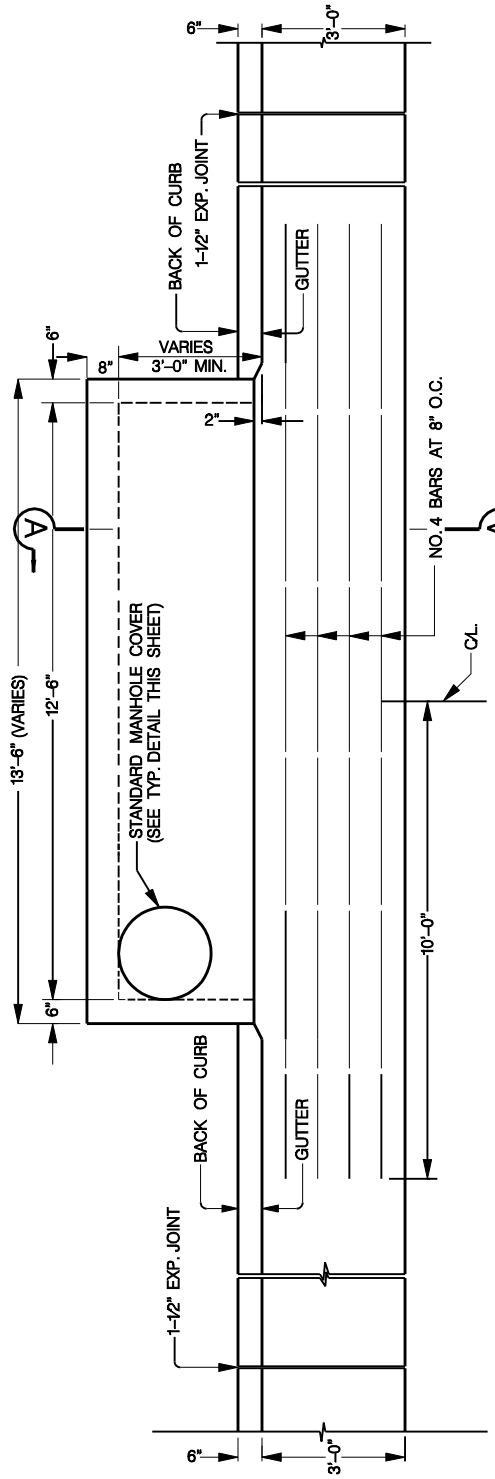
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

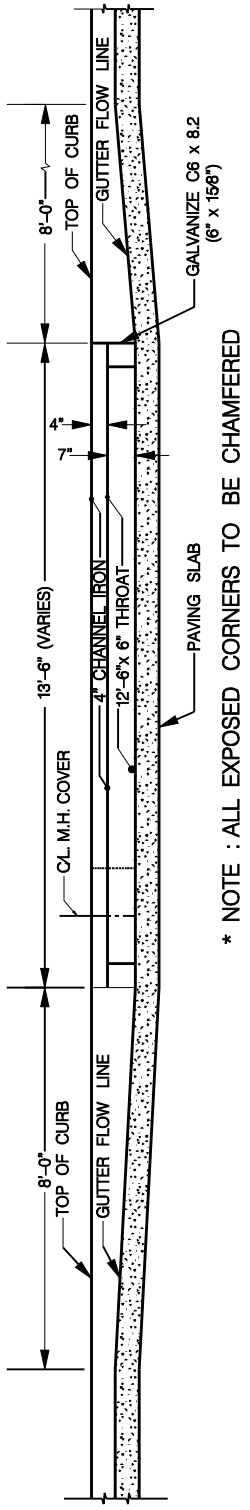
601–17

SHEET 2 OF 2



PLAN

NOT TO SCALE



ELEVATION

NOT TO SCALE

* NOTE : ALL EXPOSED CORNERS TO BE CHAMFERED

CITY OF SHREVEPORT

SPECIAL INLET CANTILEVER THROAT

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

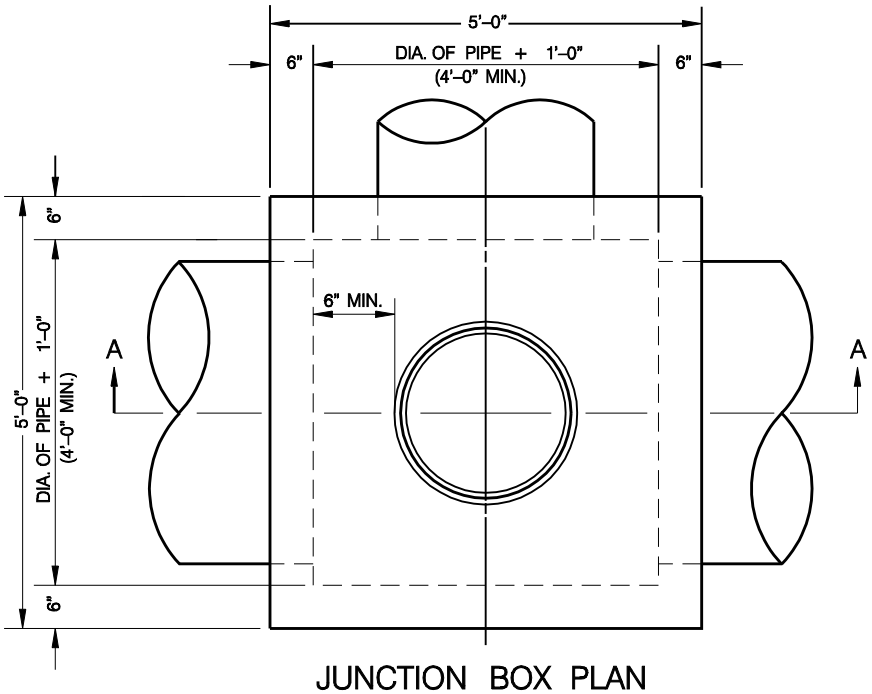
APPROVED: REW

REVISED:

STANDARD PLAN

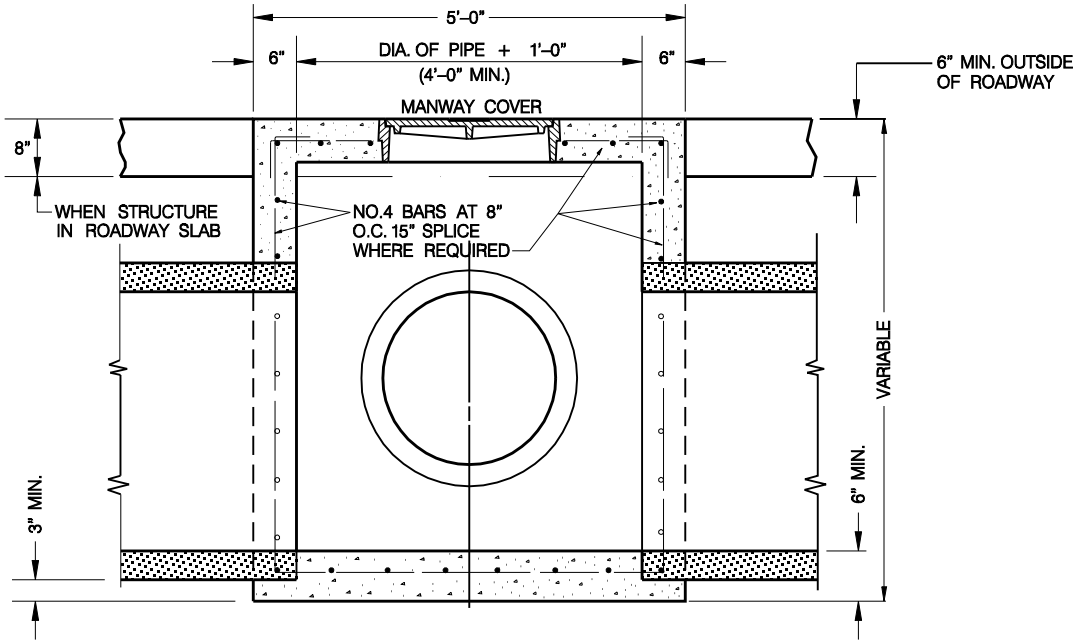
601–18

SHEET 1 OF 4



JUNCTION BOX PLAN

NOT TO SCALE



JUNCTION BOX SECTION "A – A"

NOT TO SCALE

CITY OF SHREVEPORT

TYPICAL JUNCTION BOX
WITH SOLID OR GRATE COVER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

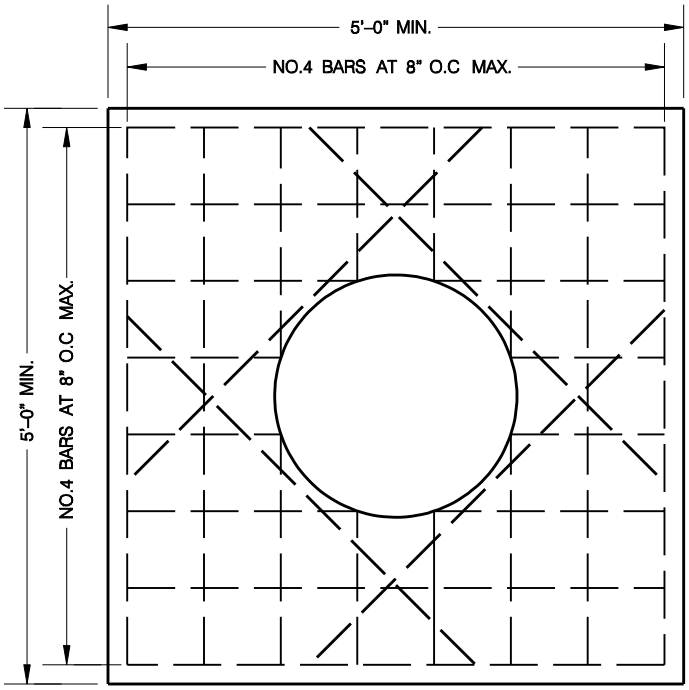
APPROVED: REW

REVISED:

STANDARD PLAN

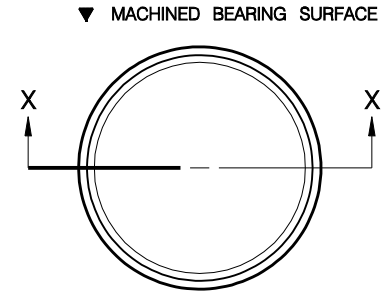
601–19

SHEET 2 OF 4

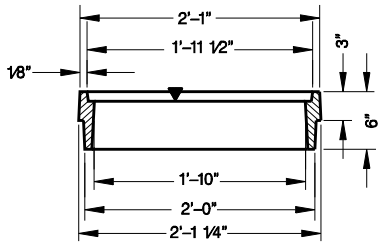


PLAN OF REINFORCING IN TOP

NOT TO SCALE



FRAME TOP VIEW



FRAME SECTION "X – X"

DETAILS OF C.I. COVER SEAT

VULCAN V–1886 FRAME OR APPROVED EQUAL

NOT TO SCALE

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL JUNCTION BOX WITH SOLID OR GRATE COVER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

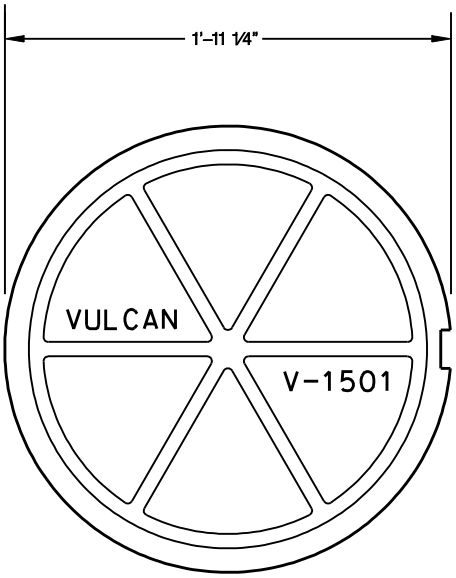
APPROVED: REW

REVISED:

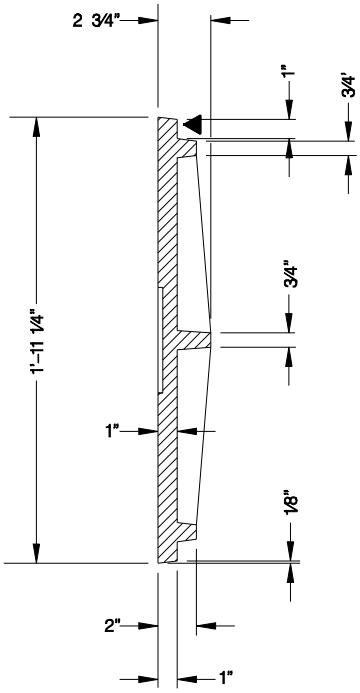
STANDARD PLAN

601-20

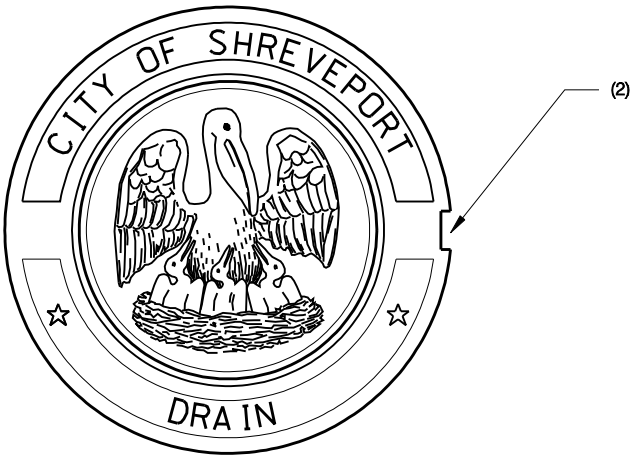
SHEET 3 OF 4



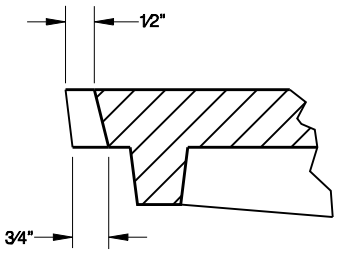
COVER BACK



COVER SECTION



COVER FACE



PICKHOLE DET.

DETAILS OF C.I. COVER

VULCAN V-1501 COVER OR APPROVED EQUAL

NOT TO SCALE

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL JUNCTION BOX WITH SOLID OR GRATE COVER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

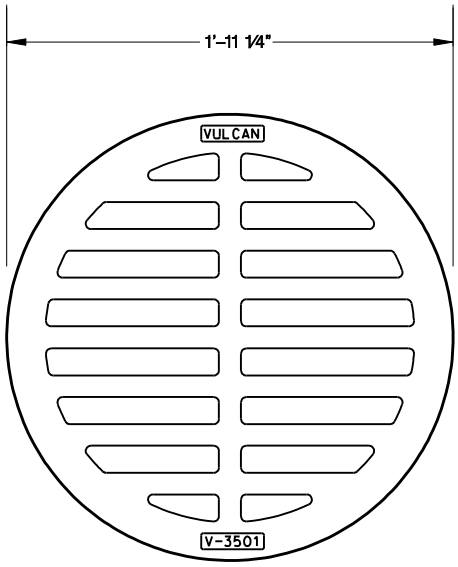
APPROVED: REW

REVISED: _____

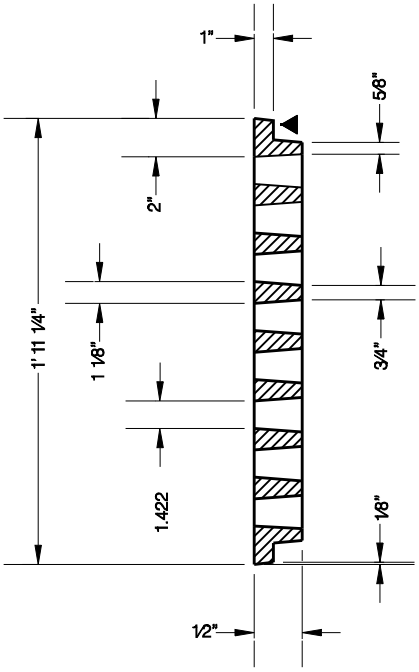
STANDARD PLAN

601–21

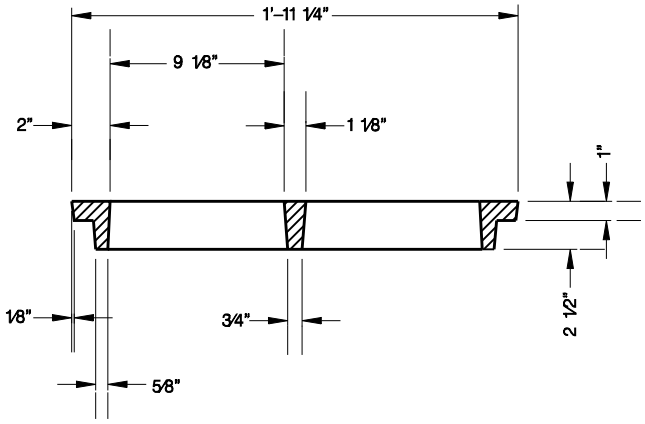
SHEET 4 OF 4



GRATE TOP VIEW



GRATE SECTION



GRATE SECTION

L.D.H.–H20–44
C.I.GRATE TYPE COVER
NOTE : TO BE USED ONLY WHEN CALLED FOR ON PLANS

DETAILS OF C.I. GRATE

VULCAN V–3501 GRATE OR APPROVED EQUAL

NOT TO SCALE

NOTES:

STEPS OF APPROVED DESIGN AT 1'–0" O.C. IF REQUIRED.

CASTING SHALL BE UNCOATED.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES DOS	CITY OF SHREVEPORT TYPICAL JUNCTION BOX WITH SOLID OR GRATE COVER USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS	DRAWN: Nhan Tran CHECKED: AZ. APPROVED: REW REVISED:

STANDARD PLAN

208–1

SHEET 1 OF 3

GENERAL NOTES

● MATERIALS LIST :

1. PRIMARY MATERIAL TO BE CONCRETE, CAST IN PLACE 4" THICK, 3000 P.S.I. MINIMUM
2. ALTERNATE NO. 1 PNEUMATICALLY PLACED CONCRETE (WET GUN OR SHORTCRETE). 4" THICK, 3000 P.S.I. MINIMUM.
3. ALL PANEL JOINTS TO HAVE WOOD FILLER, DOWELED WITH 1/2" SMOOTH, DOWELS PAINTED AND GREASED OR THICKENED EDGE. DOWELS TO BE 18" LONG, PLACED 18" O.C. ALL REPLACED SECTIONS (WALLS AND BOTTOM) TO BE MONOLITHIC WITH 3/8" DOWELS 12" LONG IN TOE. DOWELS TO BE PLACED 18" O.C. AND TIED TO WELDED WIRE FABRIC.
4. REINFORCING TO BE WELDED WIRE FABRIC 4" x 4" x #10 (42 LBS.)
5. WEEP HOLES TO BE PLACED 7' FROM JOINT MUST HAVE 1 CU.FT. GRAVEL BAGGED IN FILTER CLOTH AND VENTED THROUGH 1–1/2" P.V.C. PIPE. END OF PIPE TO BE COVERED WITH 1/4" MESH GALVANIZED WIRE FABRIC.
6. ALTERNATE DRAIN 4' WIDE GEOTEXTILE STRIP DRAINS FOLDED AND INSERTED INTO P.V.C. AT LOWER END. TOP TO FOLDED AND SECURED TO PREVENT DIRT INTRUSION (SOURCES AVAILABLE ON REQUEST.)

● SCOPE OF WORK :

1. REMOVE FAILED WALLS AND BOTTOM. CLEAN ACCUMILATED SPOIL AND DEBRIS FROM WORK AREA. SQUARE SLIPPED AREA IF APPLICABLE. (SEE TYPICAL REPAIR DETAIL).
2. RESTORE GADE USE LOCAL FILL WITH IMPORTED FILL AS REQUIRED. INSTALL IN 6" LIFTS AND COMPACT TO 90%.
3. CONCRETE (EITHER CAST IN PLACE OR SHORTCRETE).
4. DRESS AND SOD AREA, SOD ON SLOPES TO BE PEGGED WITH 12" WOOD STAKES (TWO EACH PER SOD PANEL).

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL DITCH REPAIR

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

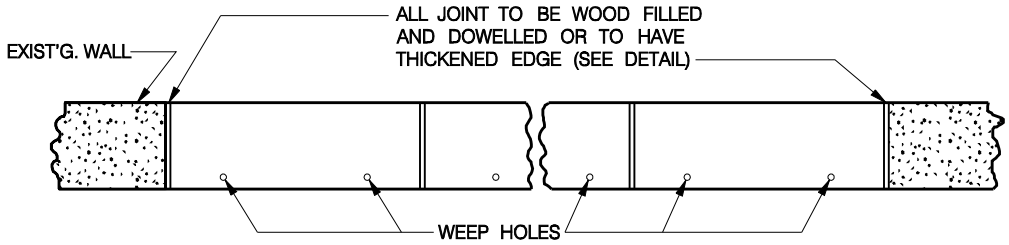
APPROVED: REW

REVISED: _____

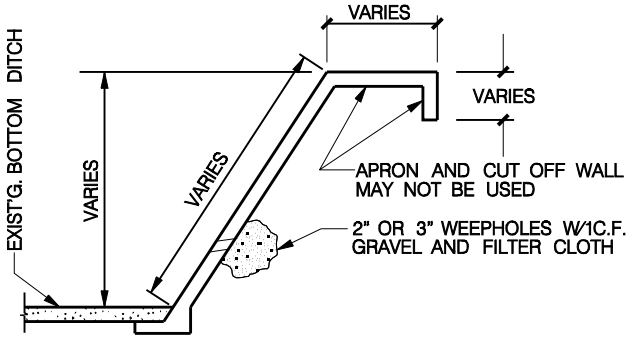
STANDARD PLAN

608–2

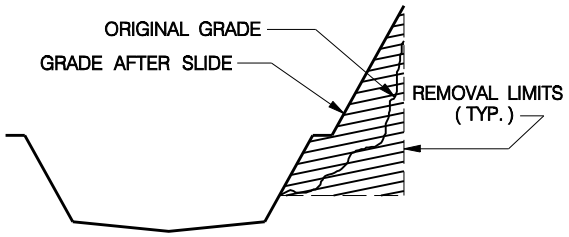
SHEET 2 OF 3



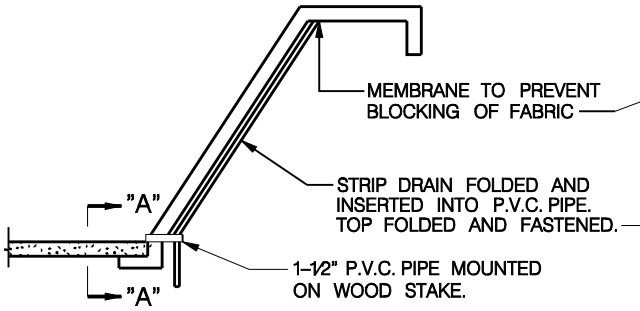
PLAN VIEW



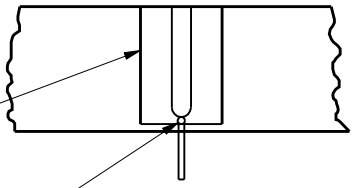
TYPICAL REPAIR DITCH WALL



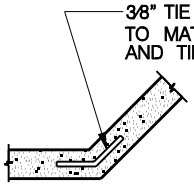
TYPICAL REPAIR SOIL SLIPAREA

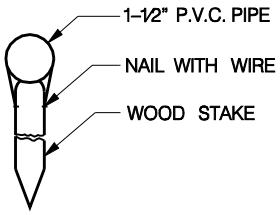


ALTERNATE DRAIN DETAIL

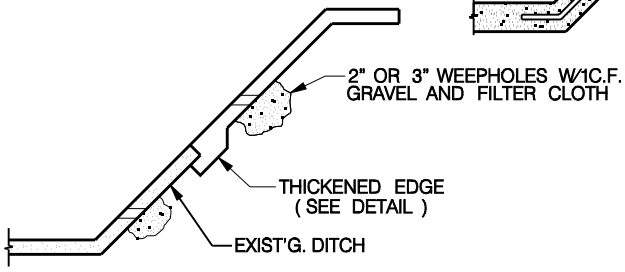


SECTION "A – A"

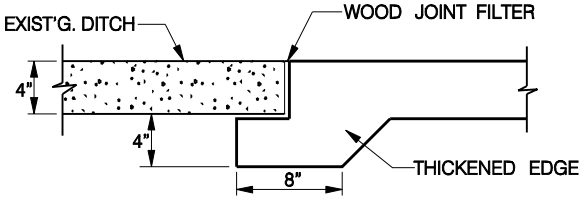




PIPE MOUNTING DETAIL



TYPICAL WALL EXTENSION



THICKENED EDGE DETAIL

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL DITCH REPAIR

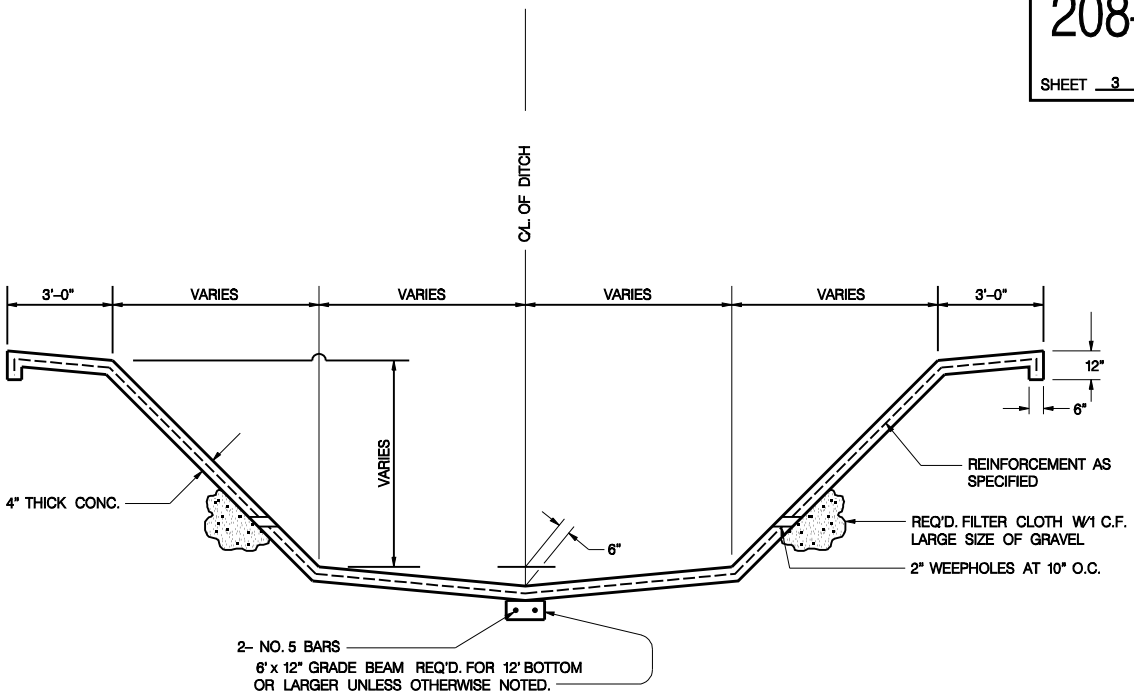
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

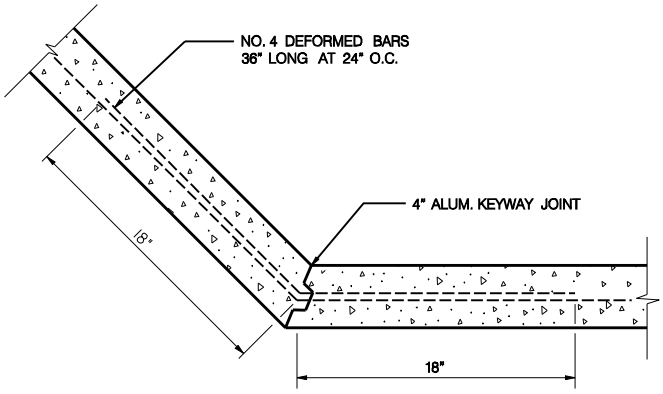
208–3

SHEET 3 OF 3



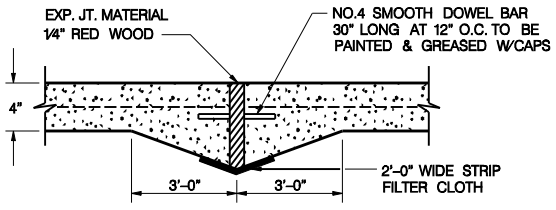
TYPICAL CONC. DITCH SECTION

NOT TO SCALE



CONSTRUCTION JOINT DETAIL

NOT TO SCALE



EXPANSION JOINT DETAIL

NOT TO SCALE

CITY OF SHREVEPORT

TYPICAL DITCH REPAIR

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

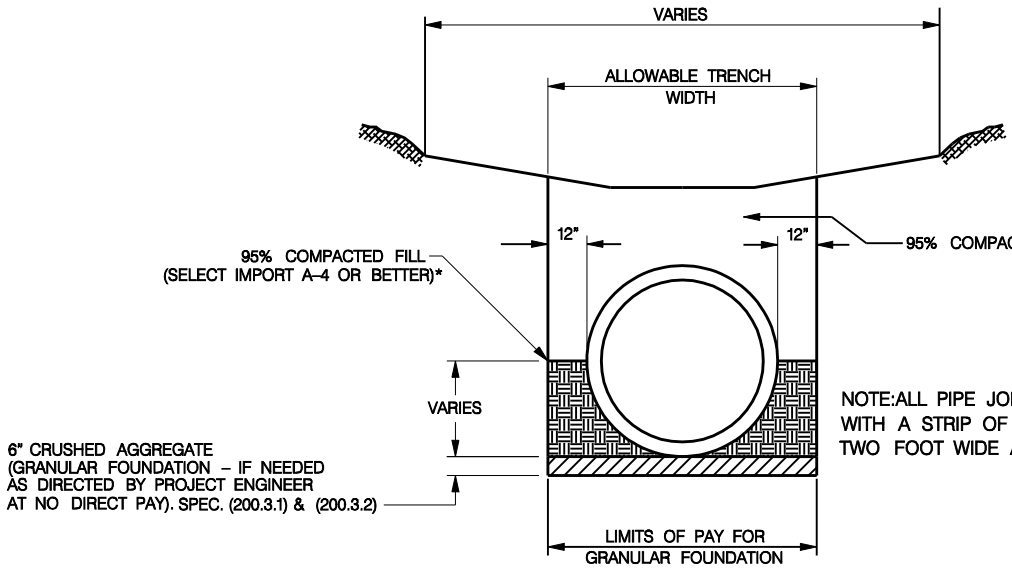
APPROVED: REW

REVISED: _____

STANDARD PLAN

1001–1

SHEET 1 OF 1



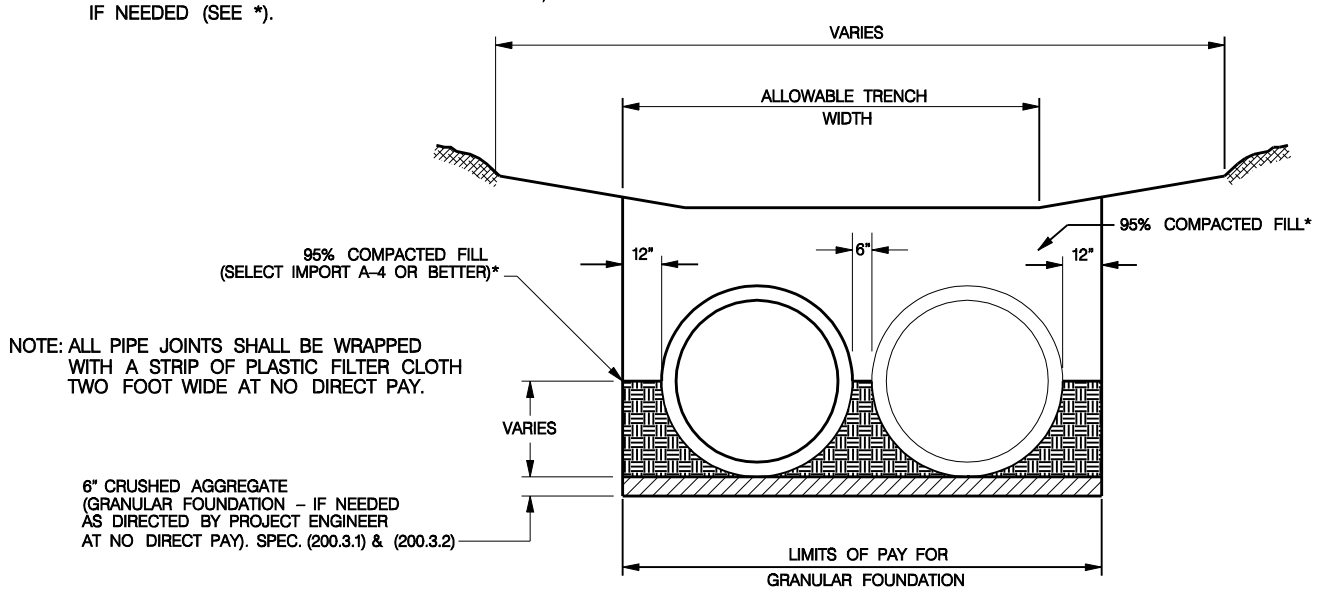
NOTE:ALL PIPE JOINTS SHALL BE WRAPPED WITH A STRIP OF PLASTIC FILTER CLOTH TWO FOOT WIDE AT NO DIRECT PAY.

*USE EXCAVATED TRENCH MATERIAL. IF TRENCH MATERIAL IS DEEMED UNSUITABLE, THE CONTRACTOR WILL FURNISH SELECT MATERIAL FOR BACKFILL AT NO DIRECT PAY.

TYPICAL PIPE BEDING (SINGLE PIPE)

NOT TO SCALE

NOTE : PAY ITEM 1001(1) – PIPE LINE IN PLACE SHALL INCLUDE ALL NECESSARY TRENCH EXCAVATION, THE REMOVAL, HANDLING, BACKFILLING, AND DISPOSAL OF ANY SURPLUS OR UNSUITABLE MATERIAL ENCOUNTERED IN THE WORK AREA AND SHALL INCLUDE ALL PUMPING, BAILING, DRAINAGE AND SHEETING AND BRACING. IT SHALL ALSO INCLUDE SELECT PIPE BACKFILL, IF NEEDED (SEE *).



NOTE: ALL PIPE JOINTS SHALL BE WRAPPED WITH A STRIP OF PLASTIC FILTER CLOTH TWO FOOT WIDE AT NO DIRECT PAY.

*USE EXCAVATED TRENCH MATERIAL. IF TRENCH MATERIAL IS DEEMED UNSUITABLE, THE CONTRACTOR WILL FURNISH SELECT MATERIAL FOR BACKFILL AT NO DIRECT PAY.

TYPICAL PIPE BEDING (DOUBLE PIPE)

NOT TO SCALE

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL PIPE BEDING & EMBANKMENT INSTALLATION

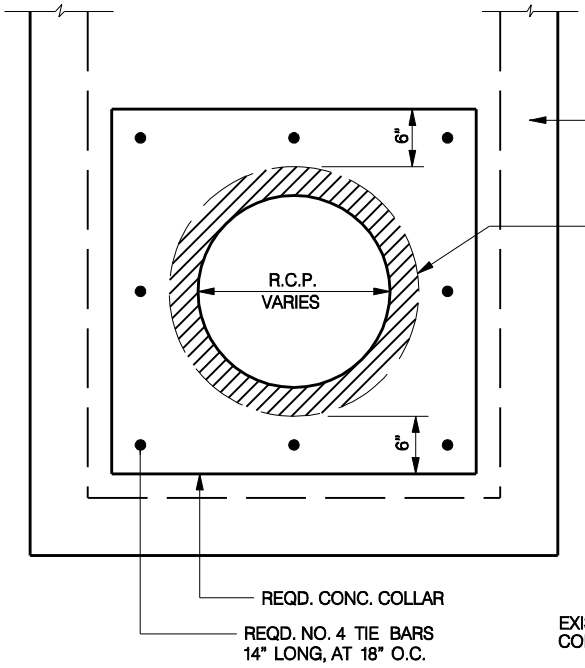
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

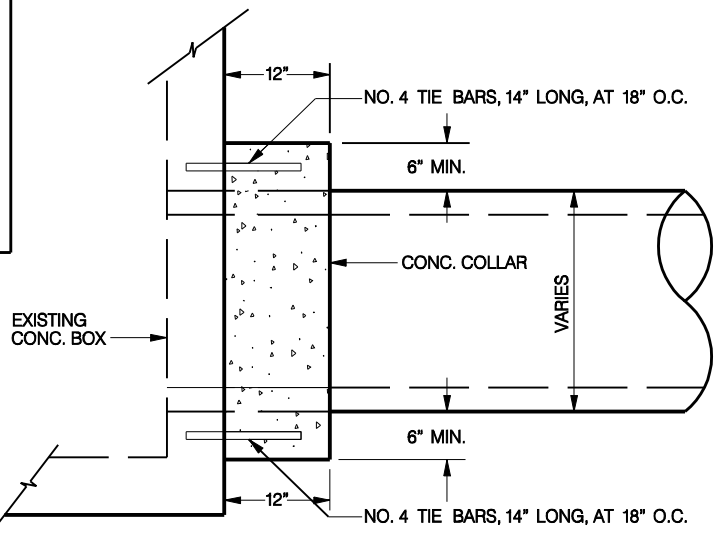
STANDARD PLAN

1001–2

SHEET 1 OF 1



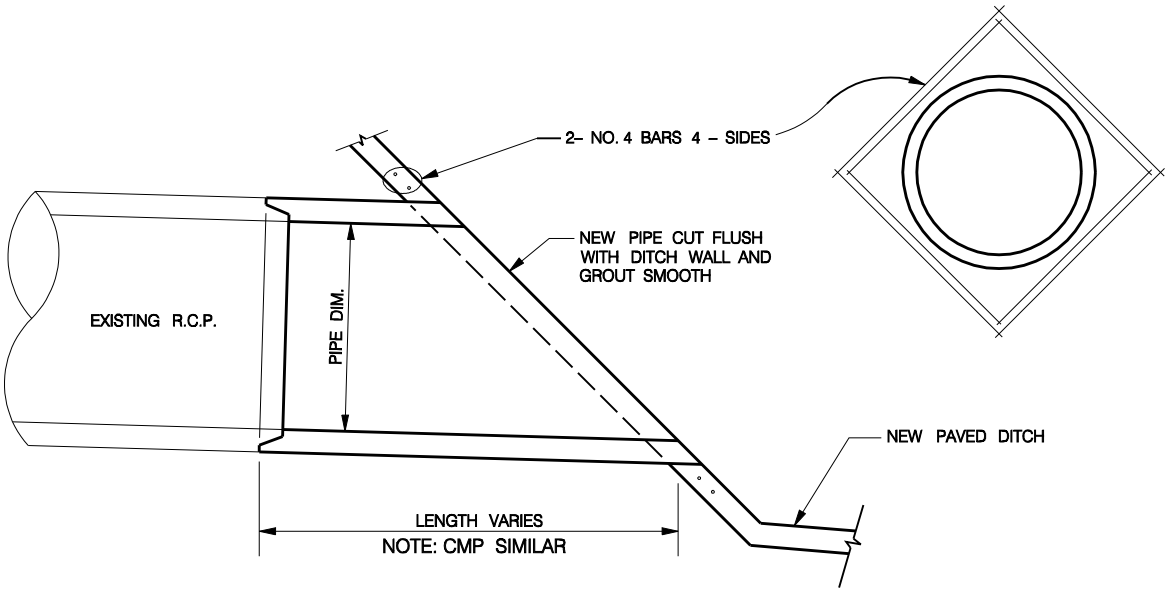
FRONT VIEW



SIDE VIEW

TIE IN R.C.P. TO EXISTING BOX

NOT TO SCALE



CITY OF SHREVEPORT

R.C.P. TIE IN TO EXISTING BOX AND DITCH WALL

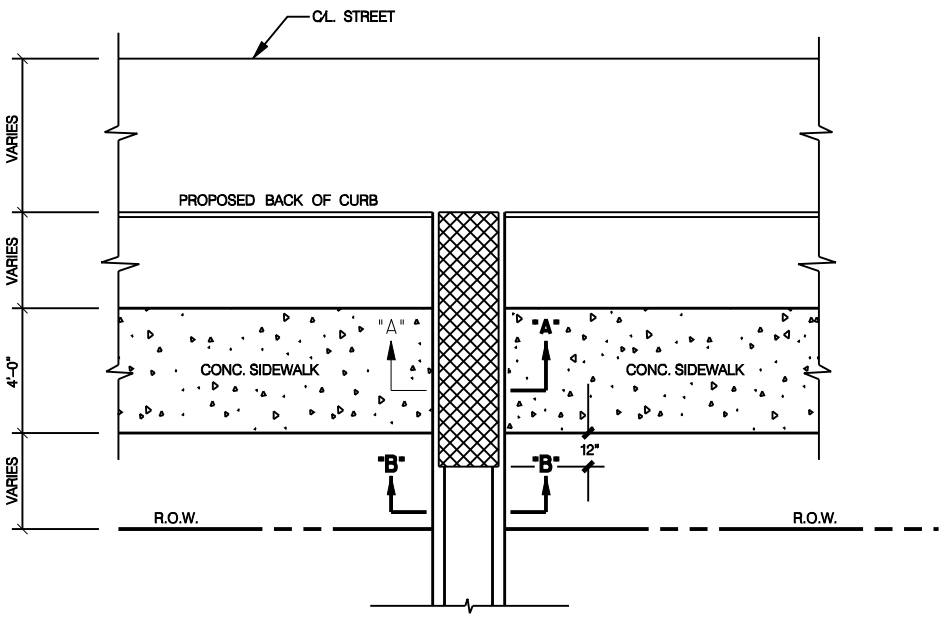
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

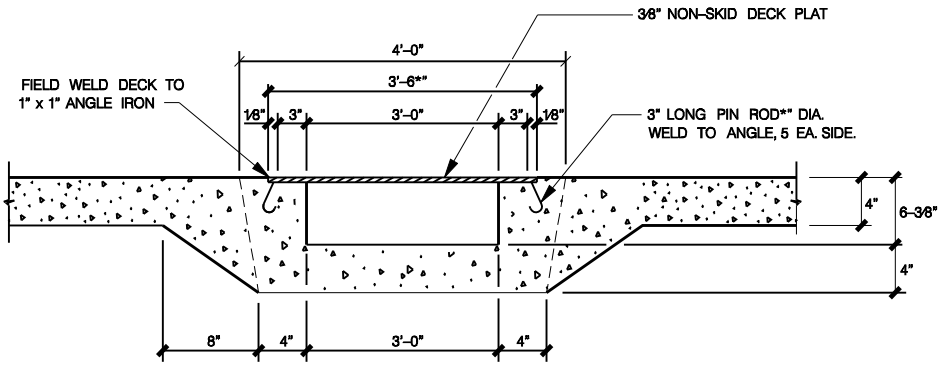
STANDARD PLAN

S–5

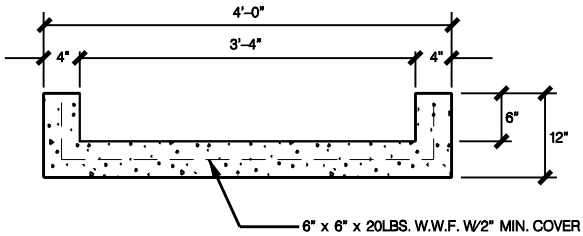
SHEET 1 OF 1



PLAN
NOT TO SCALE



SECTION " A – A "
NOT TO SCALE



SECTION " B – B "
NOT TO SCALE

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

SIDEWALK FLUME DETAIL

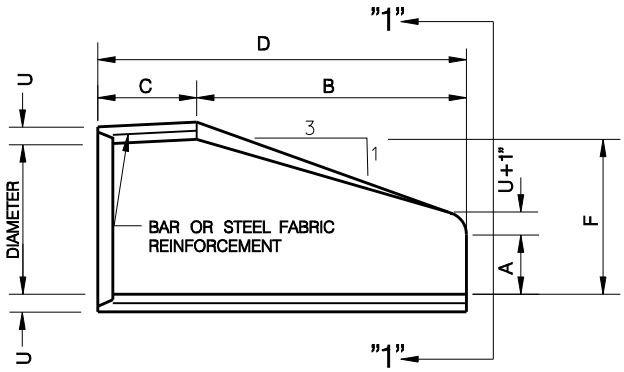
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

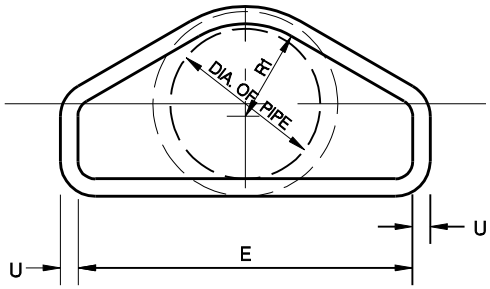
STANDARD PLAN

S–7

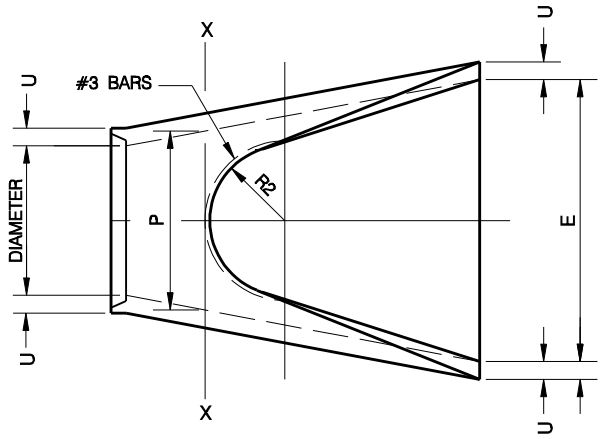
SHEET 1 OF 1



CROSS SECTION AT CENTER LINE



VIEW "1 – 1"



P L A N

PRECAST END SECTION

NOT TO SCALE

TABLE OF DIMENSIONS

PIPE DIA.	U	A	B	C	D	E	F	AT 'X–X' ONLY P	R1	R2	R3	WT.
12	2"	4"	2'–0"	4'–0 7/8"	6'–0 7/8"	2'–0"	13"	19 15/16"	10 1/8"	9"	4"	530
15	2 1/4"	6"	2'–3"	3'–10"	6'–1"	2'–6"	16"	24 5/16"	12 1/2"	11"	6"	740
18	2 1/2"	9"	2'–3"	3'–10"	6'–1"	3'–0"	19"	29"	15 1/2"	12"	7 1/2"	990
21	2 3/4"	9"	3'–0"	3'–1"	6'–1"	3'–6"	22"	31 5/8"	16 1/8"	13"	5"	1280
24	3"	9 1/2"	3'–7 1/2"	2'–6"	6'–1 1/2"	4'–0"	25"	33 3/16"	16 13/16"	14"	8"	1520
27	3 1/4"	10 1/2"	4'–0"	2'–1 1/2"	6'–1 1/2"	4'–6"	28"	36"	18 9/16"	14 1/2"	9"	1930
30	3 1/2"	1'–0"	4'–6"	1'–7 3/4"	6'–1 3/4"	5'–0"	31"	37"	18 1/2"	15"	8"	2190
33	3 3/4"	1'–1 1/2"	4'–10 1/2"	3'–1 1/2"	8'–0"	5'–6"	34"	45 3/16"	23 3/4"	17 1/2"	9"	3150
36	4"	1'–3"	5'–3"	2'–9"	8'–0"	6'–0"	37"	47 1/2"	24 5/16"	20"	11"	4100
42	4 1/2"	1'–9"	5'–3"	2'–9"	8'–0"	6'–6"	43"	53 1/2"	27 1/2"	22"	11"	5380
46	5"	2'–0"	6'–0"	2'–0"	8'–0"	7'–0"	49"	56 3/4"	28 1/2"	22"	12"	6550

CITY OF SHREVEPORT

PRECAST PIPE END SECTION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

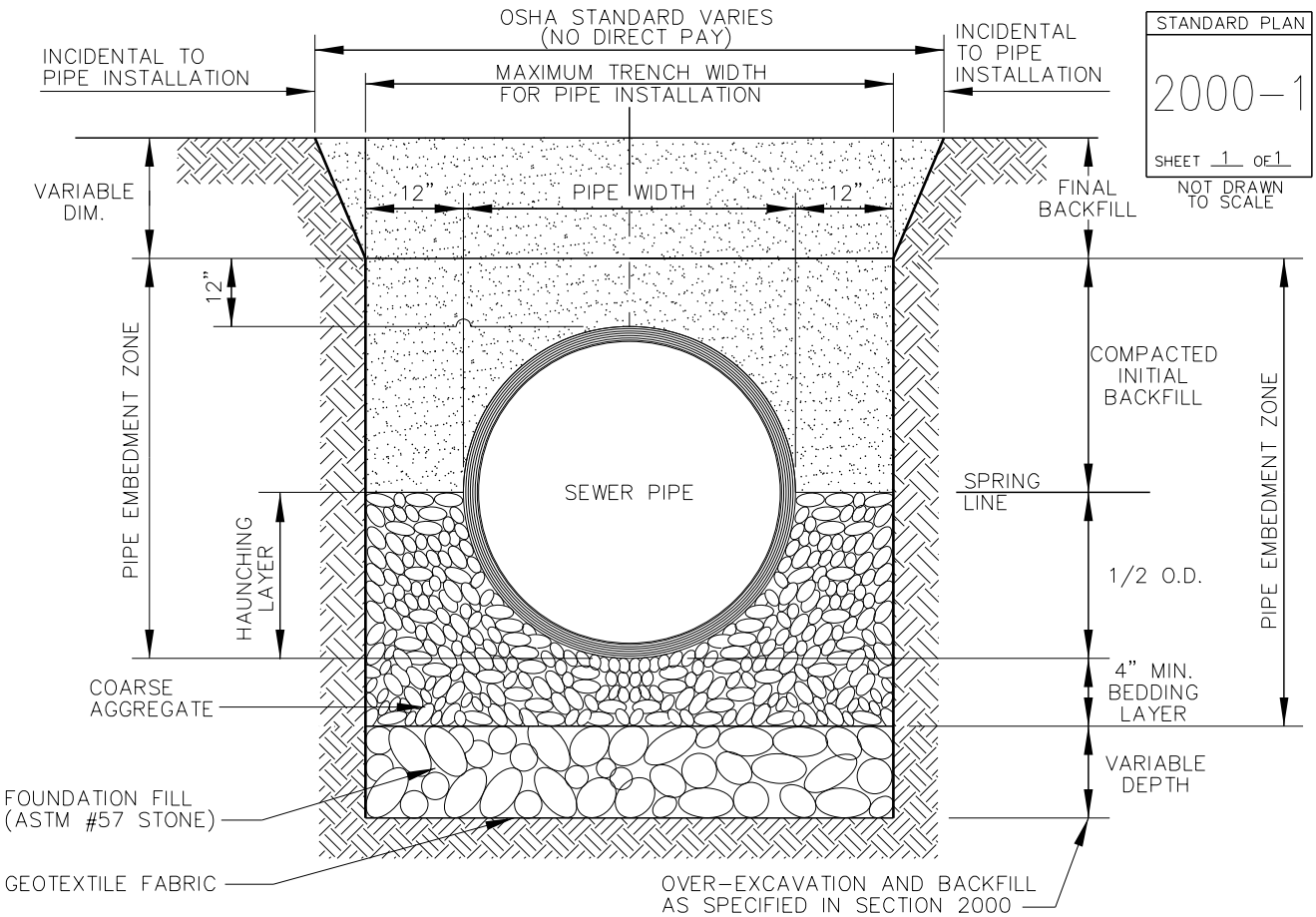
DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

2000-1

SHEET 1 OF 1

NOT DRAWN TO SCALE



TYPICAL SECTION

NOTES:

1. MATERIAL USED FOR BEDDING AND HAUNCHING SHALL BE COMPOSED OF SOUND AND DURABLE PARTICLES OF COARSE AGGREGATE AND SHALL CONFORM TO THE GRADATION INDICATED BELOW. COARSE AGGREGATE SHALL BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED TO 95% DENSITY AS DETERMINED BY THE AASHTO METHOD T – 99.
2. INITIAL AND FINAL BACKFILL SHALL BE FINELY DIVIDED MATERIAL AS SPECIFIED IN SECTON 1002. BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO STANDARD METHOD T-99. IF PERMITTED BY THE ENGINEER, COARSE AGGREGATE MAY BE SUBSTITUTED FOR ALL OR PART OF COMPACTED BACKFILL AREA, AS REQUIRED.
3. PIPE BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH THESE MINIMUM STANDARDS OR MANUFACTURERS RECOMMENDED INSTALLATION PROCEDURE, WHICHEVER IS MORE STRINGENT.
4. COST OF EXCAVATION, GEOTEXTILE FABRIC, BEDDING, HAUNCHING, AND BACKFILL SHALL BE INCLUDED IN THE GRAVITY SEWER MAIN BID ITEM.
5. SEE STANDARD SPECIFICATIONS SECTIONS 2000 AND 1002.

BEDDING & HAUNCHING LAYER COARSE AGGREGATE GRADATION REQUIREMENTS:

3/4"	100%
1/2"	80 – 95%
3/8"	25 – 60%
#4 SIEVE	5 – 15%
#10 SIEVE	MIN. 5%

CITY OF SHREVEPORT

GRAVITY SEWER PIPE EMBEDMENT / BACKFILL

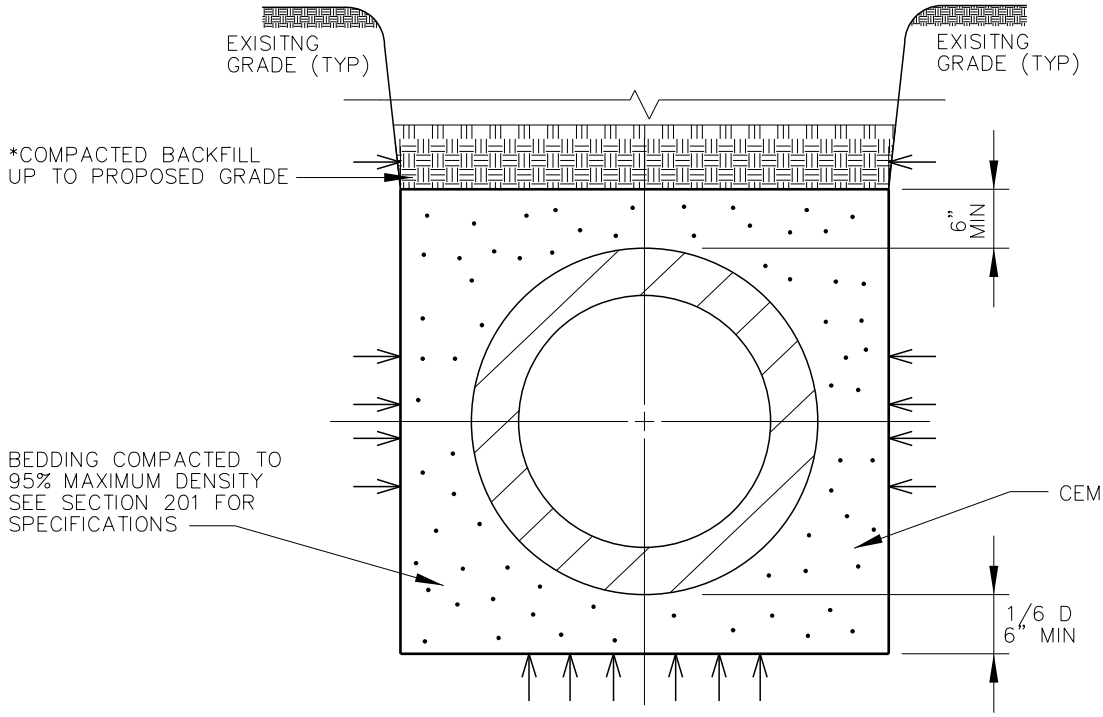
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

REVISED: RP



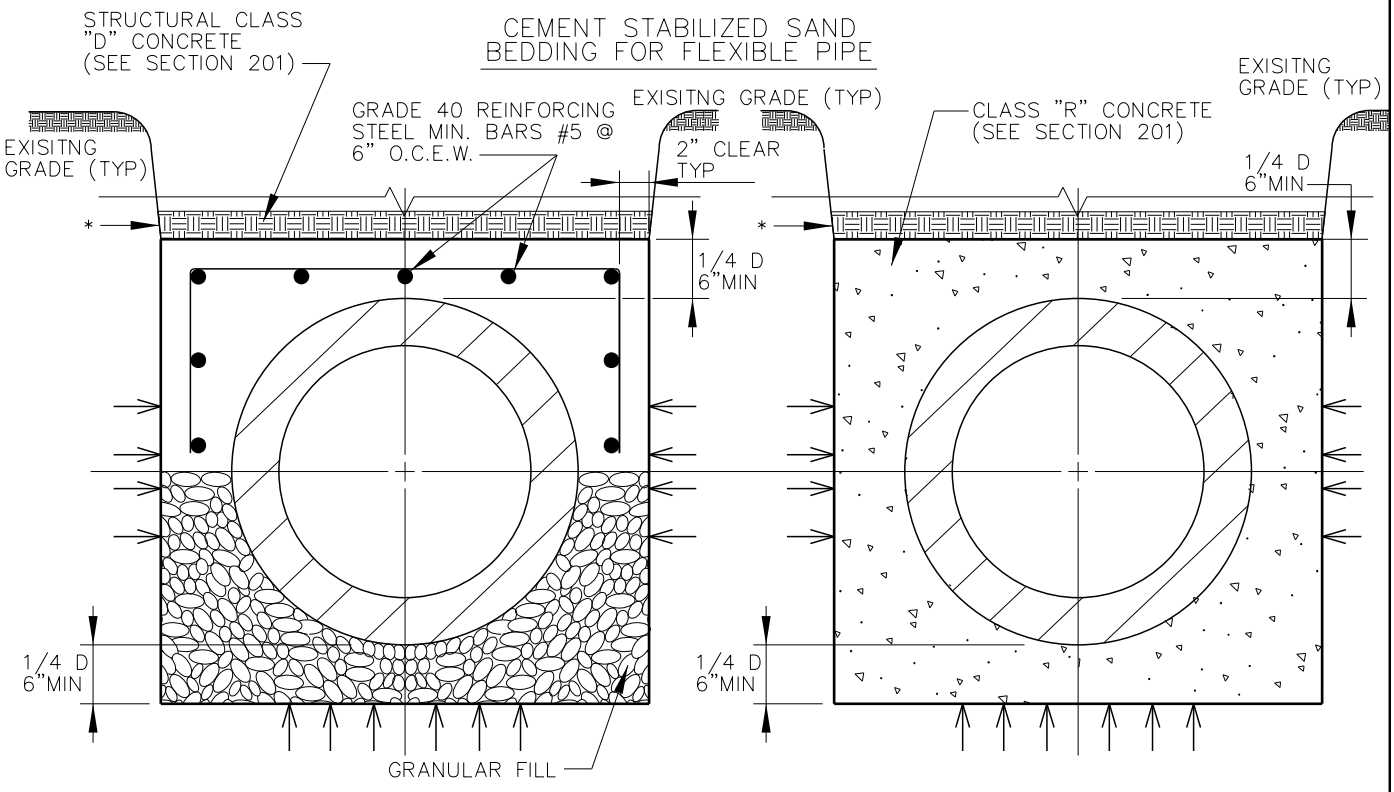
STANDARD PLAN

2000-2

SHEET 1 OF 1

NOT DRAWN
TO SCALE

CEMENT STABILIZED SAND
BEDDING FOR FLEXIBLE PIPE



CONCRETE
ARCH ENCASEMENT

CIRCUMFERENTIAL
CONCRETE ENCASEMENT

NOTE:

THE TRENCH WIDTH FROM THE BOTTOM OF THE TRENCH TO AN ELEVATION 12 INCHES ABOVE THE TOP OF THE PIPE SHALL NOT EXCEED THE MAXIMUM WIDTH OF 12 INCHES EITHER SIDE OF THE PIPE.

CITY OF SHREVEPORT

ENCASEMENTS FOR SEWER MAINS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

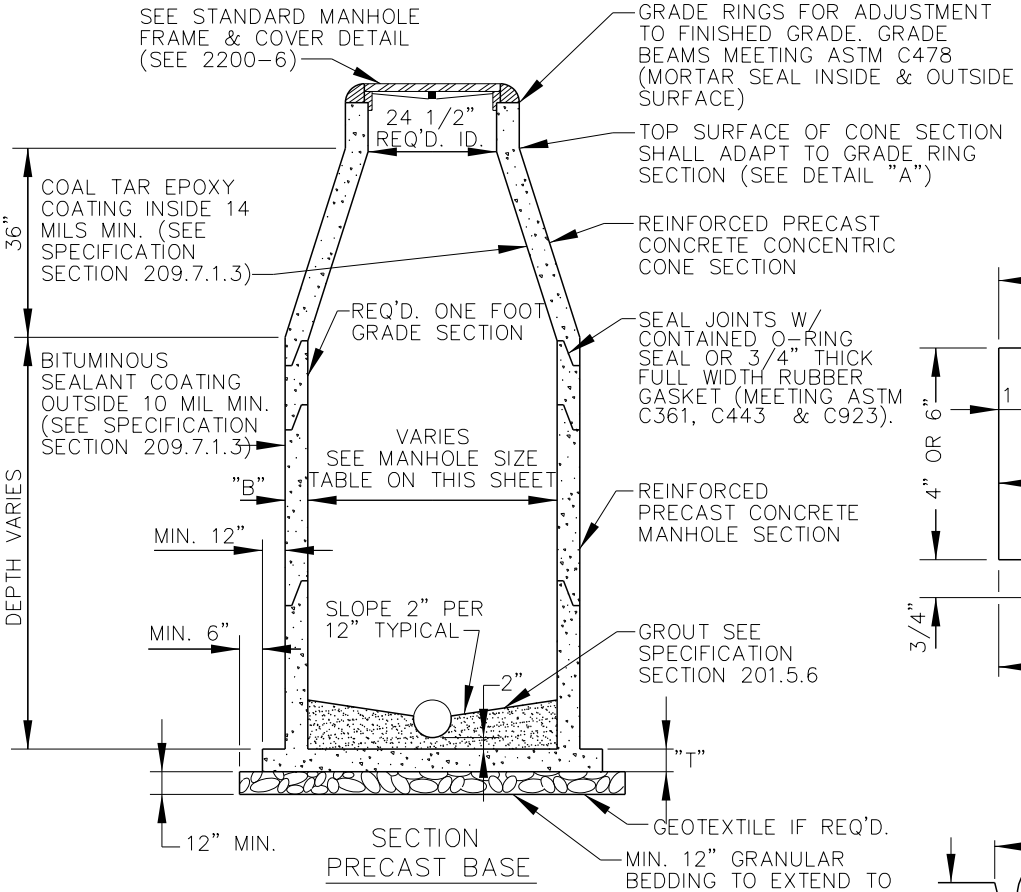
CHECKED: EES

APPROVED: KAP

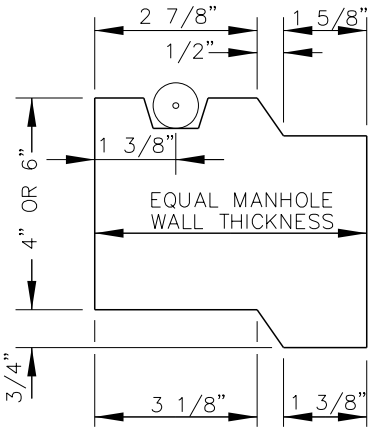
REVISED: RP

STANDARD PLAN
2200-1
SHEET 1 OF 1

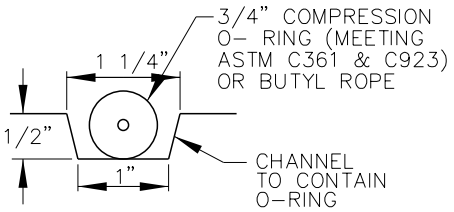
NOT DRAWN TO SCALE



SECTION
PRECAST BASE



DETAIL "B"
WALL THICKNESS



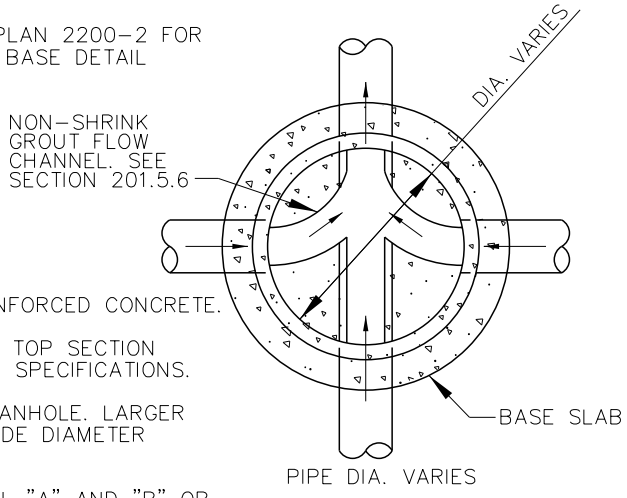
DETAIL "A"
GRADE RING
CROSS - SECTION

MINIMUM MANHOLE SIZE	
SEWER DIAMETER (IN)	MIN. MANHOLE SIZE (IN)
≤15"	48"
>15" ≤27"	60"
>27" ≤36"	72"
>36"	SPECIAL DESIGN

BASE THICKNESS "T"	
MANHOLE DEPTH (FT)	THICKNESS (IN)
0'-12'	8"
>12'	12"

WALL THICKNESS "B"	
MANHOLE I.D. (IN)	WALL THICKNESS (IN)
≤48"	5"
>48"≤60"	6"
>60"≤72"	7"

NOTE:
SEE STANDARD PLAN 2200-2 FOR CAST-IN-PLACE BASE DETAIL



PLAN
BASE SLAB

NOTES:
1. ALL MANHOLES SHALL BE CONSTRUCTED OF PERCAST REINFORCED CONCRETE.
2. PRECAST MANHOLE AND APPURTENANCES AND FLAT SLAB TOP SECTION SHALL CONFORM TO ASTM DESIGNATION C-478 STANDARD SPECIFICATIONS.
3. MINIMUM WALL THICKNESS SHALL BE 5" FOR A 48" I.D. MANHOLE. LARGER MANHOLES SHALL REQUIRE 1" OF THICKNESS PER 12" INSIDE DIAMETER INCREMENT.
4. GRADE RING SECTIONS SHALL CONFORM TO TYPICAL DETAIL "A" AND "B" OR AN APPROVED EQUAL.
5. WHERE MANHOLES ARE CONSTRUCTED IN TRAFFIC BEARING AREAS THE GRADE RING SECTION O-RING SHALL BE DELETED AND THE TOUNGE AND GROOVE JOINT SECURED BY APPLYING A MORTAR SEAL.

CITY OF SHREVEPORT

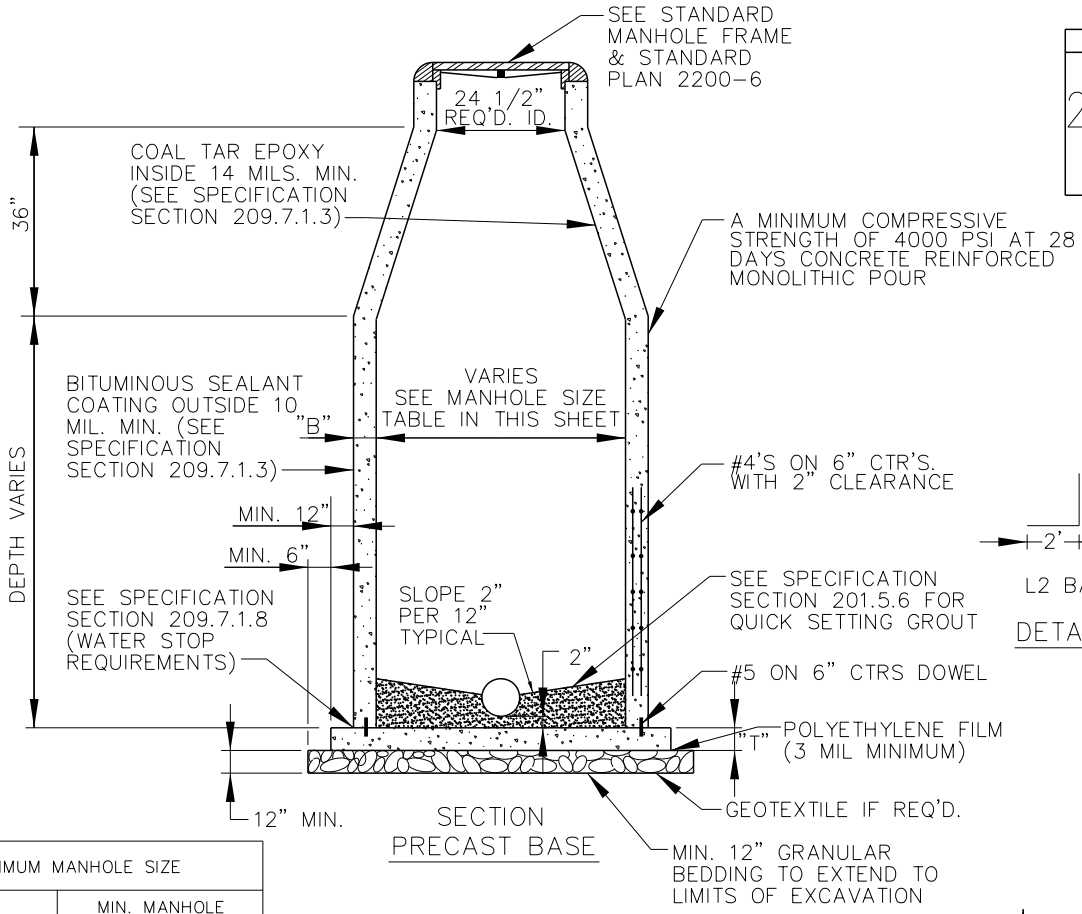
PRECAST MANHOLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: EES
APPROVED: KAP
REVISED: RP

STANDARD PLAN
2200–2
SHEET 1 OF 1

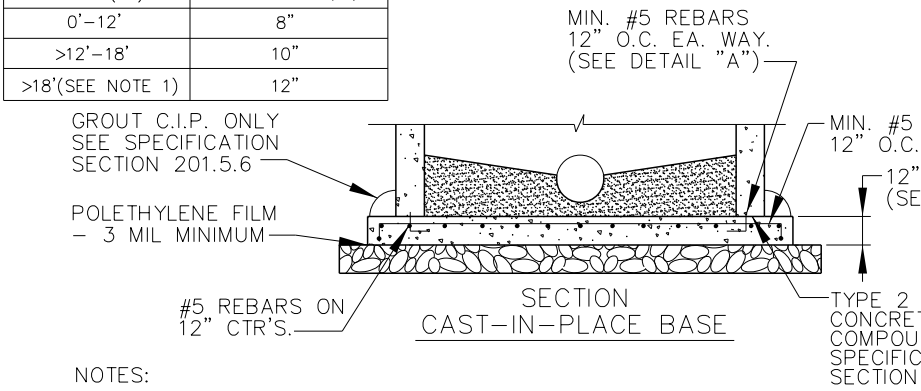
NOT DRAWN TO SCALE

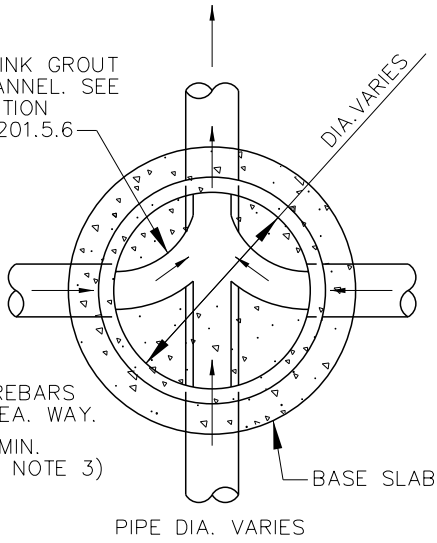


MINIMUM MANHOLE SIZE	
SEWER DIAMETER (IN)	MIN. MANHOLE SIZE (IN)
≤15"	48"
>15" ≤27"	60"
>27" ≤36"	72"
>36"	SPECIAL DESIGN

BASE THICKNESS "T"	
MANHOLE DEPTH (FT)	THICKNESS (IN)
0'–12'	10"
>12'	12"

WALL THICKNESS "B"	
MANHOLE DEPTH (FT)	WALL THICKNESS (IN)
0'–12'	8"
>12'–18'	10"
>18'(SEE NOTE 1)	12"





NOTES:

1. MINIMUM WALL THICKNESS SHALL BE 8" FOR 0' – 12' DEPTH MANHOLES. LARGER MANHOLES SHALL REQUIRE 2" OF THICKNESS PER EACH ADDITIONAL 6' OF DEPTH.
2. METHOD OF CONSTRUCTING CAST–IN–PLACE MANHOLES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR PRIOR APPROVAL.

CITY OF SHREVEPORT

CAST – IN – PLACE MANHOLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

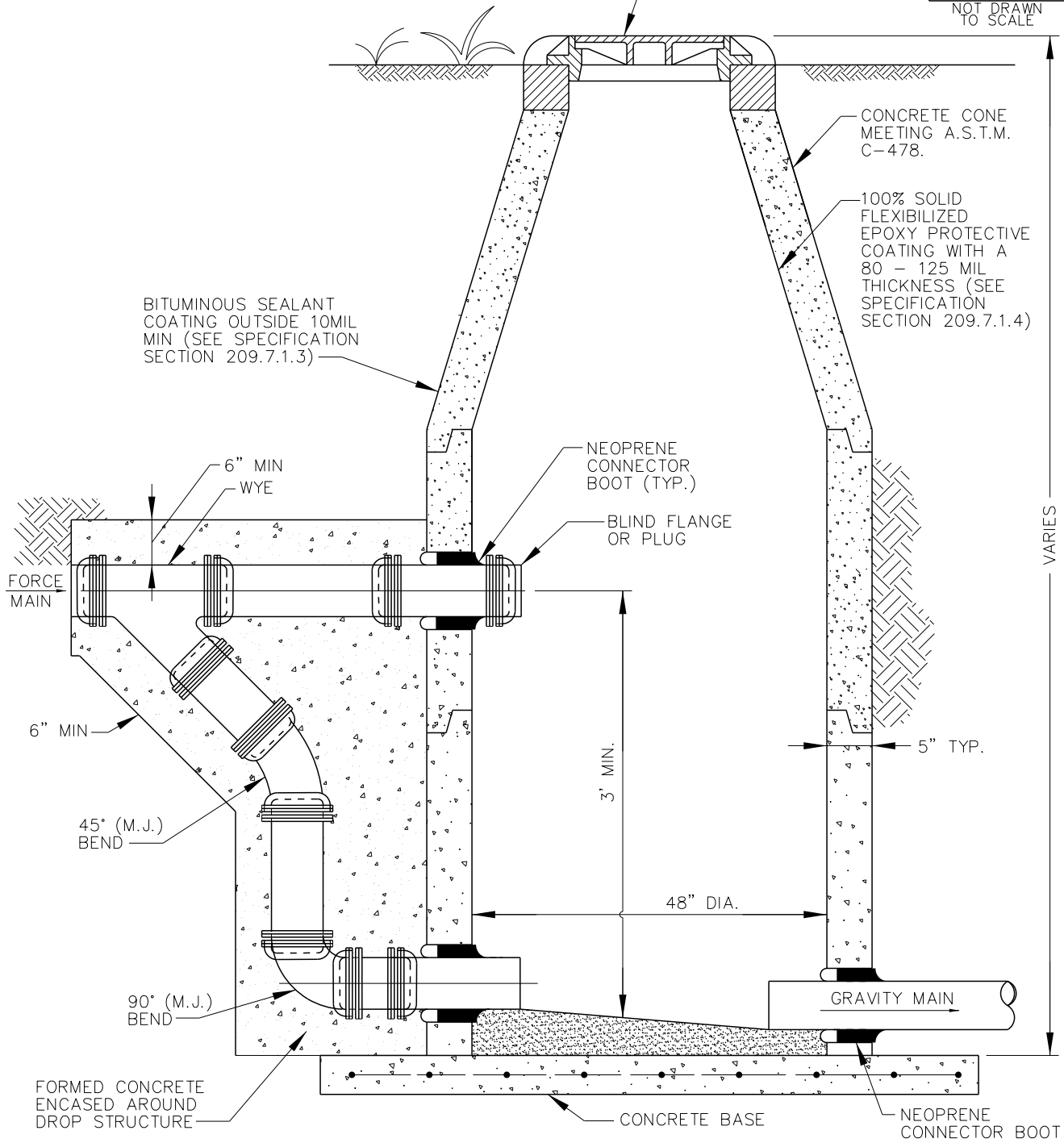
DRAWN: Nhan Tran
CHECKED: EES
APPROVED: KAP
REVISED: RP

STANDARD PLAN

2200–3

SHEET 1 OF 1

NOT DRAWN TO SCALE



DISCHARGE MANHOLE (PRECAST)

NOTE:

1. DISCHARGE MANHOLE CONSTRUCTION SAME AS STANDARD MANHOLES. SEE STANDARD MANHOLE DETAIL 2200–1.

CITY OF SHREVEPORT

FORCEMAIN DISCHARGE MANHOLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

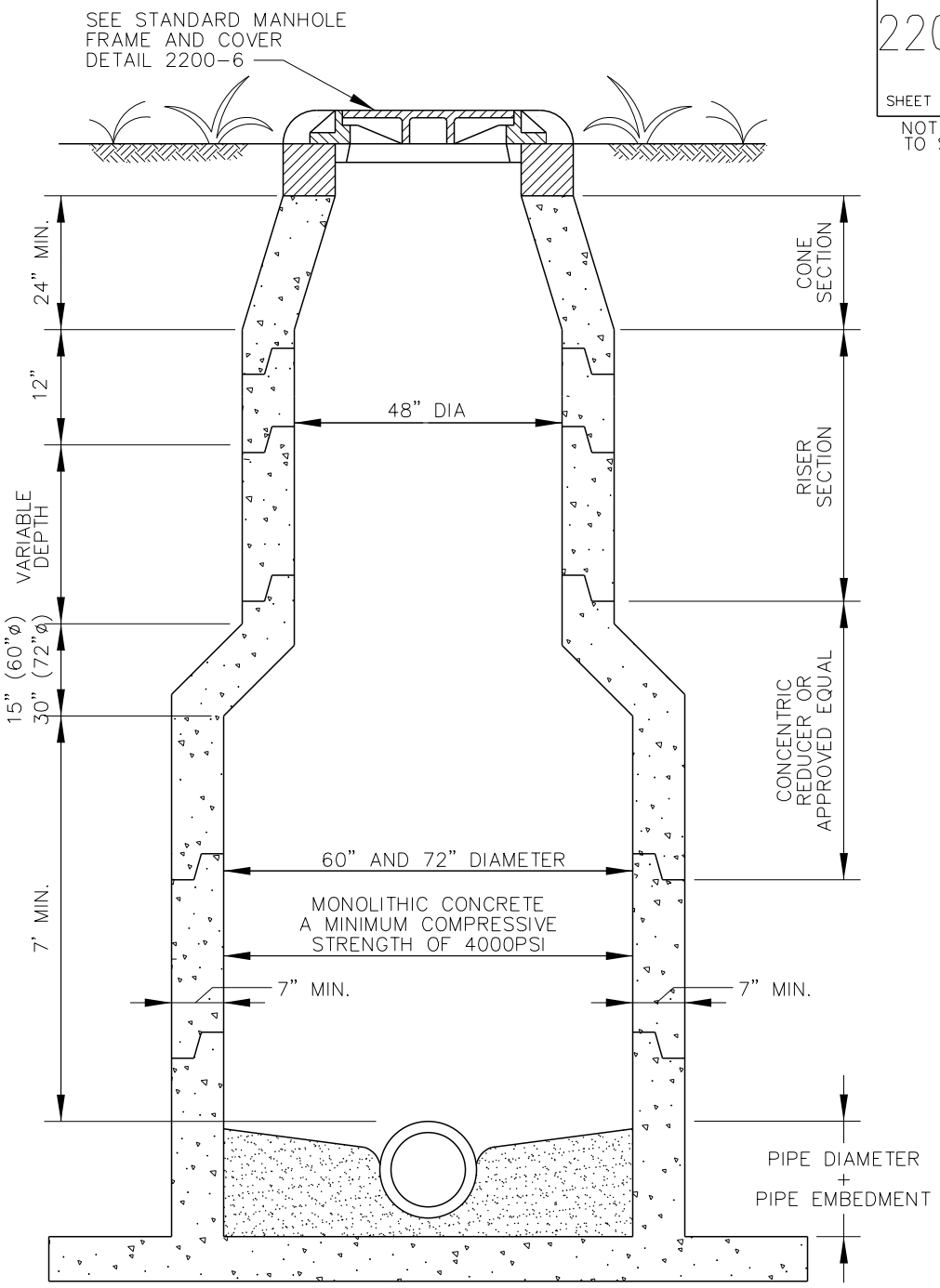
REVISED: RP

STANDARD PLAN

2200-4

SHEET 1 OF 1

NOT DRAWN TO SCALE



PRECAST TRANSITION DETAIL FOR 60" AND 72" INTERNAL DIAMETER (ID) MANHOLES

NOTE:

FOR FUTHER SPECIFICATIONS ON MANHOLE STRUCTURE REFER TO MANHOLE DETAILS 2200-1, AND SPECIFICATION SECTION 209.

CITY OF SHREVEPORT

TRANSITION MANHOLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

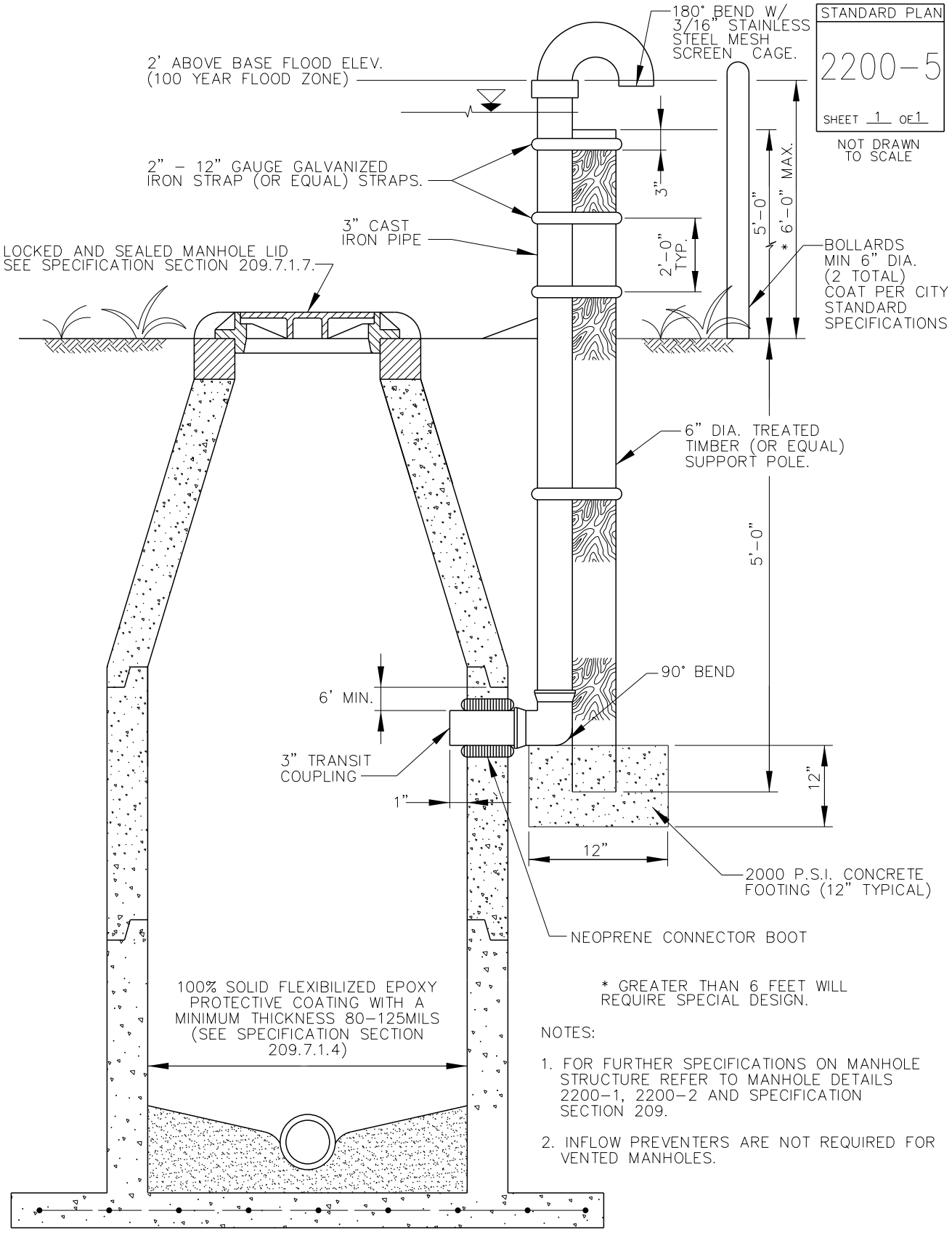
REVISED: RP

STANDARD PLAN

2200-5

SHEET 1 OF 1

NOT DRAWN TO SCALE



* GREATER THAN 6 FEET WILL REQUIRE SPECIAL DESIGN.

NOTES:

1. FOR FURTHER SPECIFICATIONS ON MANHOLE STRUCTURE REFER TO MANHOLE DETAILS 2200–1, 2200–2 AND SPECIFICATION SECTION 209.
2. INFLOW PREVENTERS ARE NOT REQUIRED FOR VENTED MANHOLES.

CITY OF SHREVEPORT

VENTED MANHOLE DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

REVISED: RP

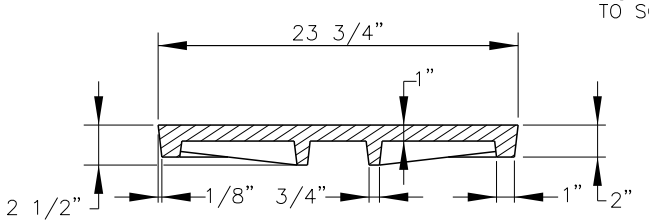
STANDARD PLAN

2200-6

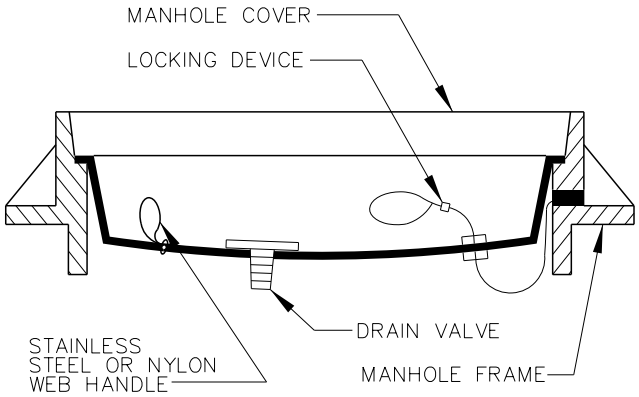
SHEET 1 OF 1

NOT DRAWN TO SCALE

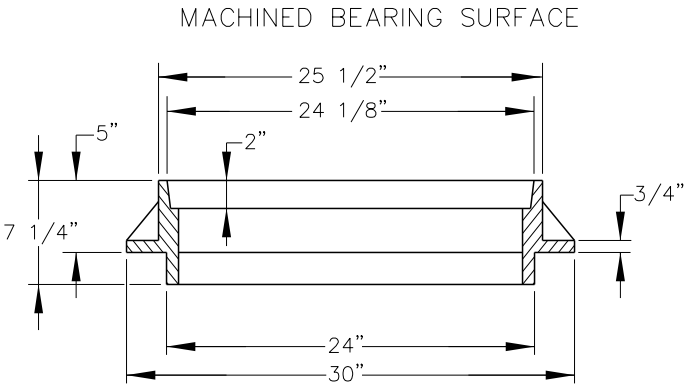
COVER FACE



COVER SECTION



INFLOW PREVENTER



FRAME SECTION

NOTES:

1. HIGH DENSITY POLYETHYLENE INFLOW PREENTER, MEETING ASTM D 1248 CLASS A, CATEGORY 5 REQUIRED IN ALL MANHOLES NOT LOCATED IN TRAFFIC BEARING AREA.
2. STAINLESS STEEL INFLOW PREVENTER IS REQUIRED IN ALL MANHOLES LOCATED IN TRAFFIC BEARING AREA.
3. SEE TECHNICAL SPECIFICATION SECTION 209.
4. APPLY COAT OF MULTI-BLACK ASPHALT BASE PAINT TO SURFACE OF FRAME AND COVER CASTING. (SEE SPECIFICATION SECTION 209 AND 2200).

CITY OF SHREVEPORT

MANHOLE FRAME & COVER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

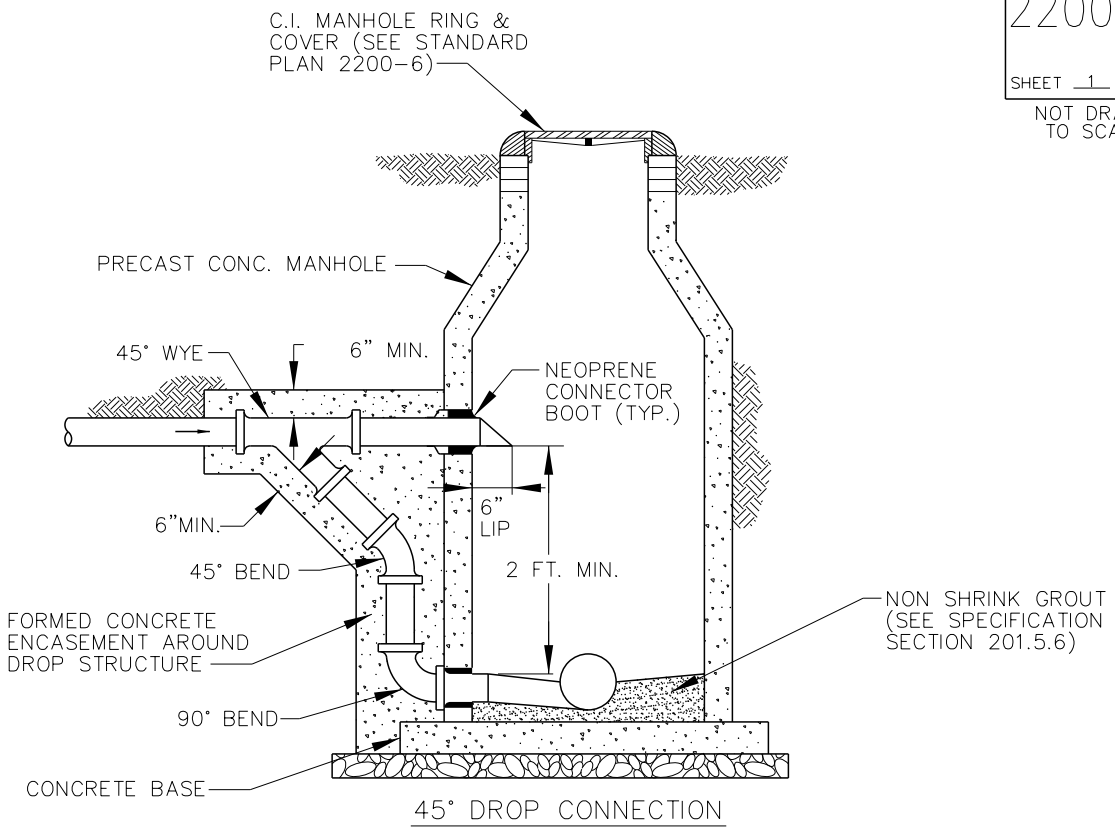
REVISED: RP

STANDARD PLAN

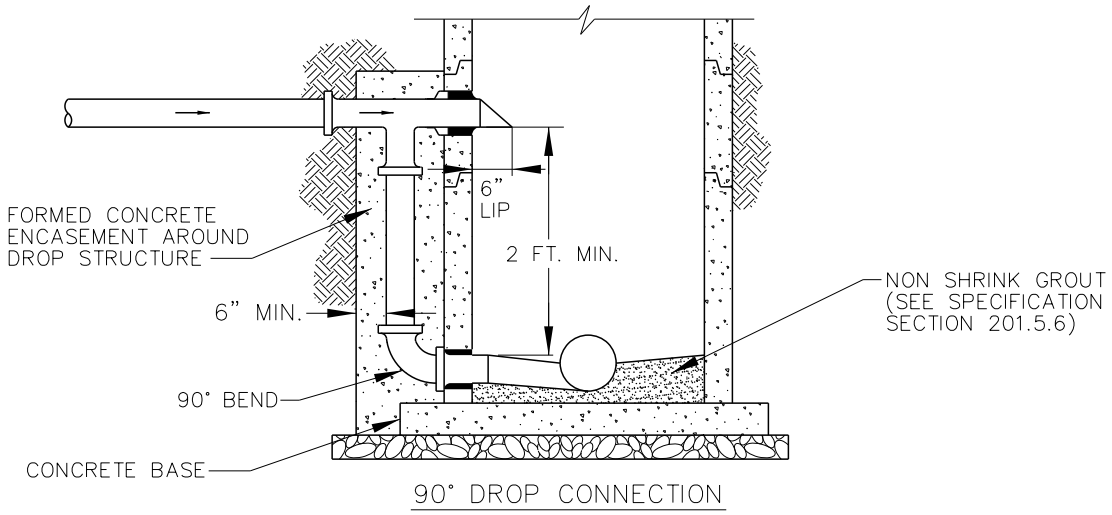
2200-7

SHEET 1 OF 1

NOT DRAWN TO SCALE



45° DROP CONNECTION



90° DROP CONNECTION

NOTES:

1. TYPE OF DROP STRUCTURE USED SHALL BE DETERMINED BY THE ENGINEER.
2. INTERIOR SURFACE OF DROP STRUCTURE MANHOLE SHALL BE COATED AS IN SPECIFIED SECTION 209.7.1.5.
3. FOR FURTHER SPECIFICATIONS, REFER TO MANHOLE DETAILS 2200-1, 2200-2 AND SPECIFICATION SECTION 209.

CITY OF SHREVEPORT

OUTSIDE MANHOLE DROP CONNECTIONS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

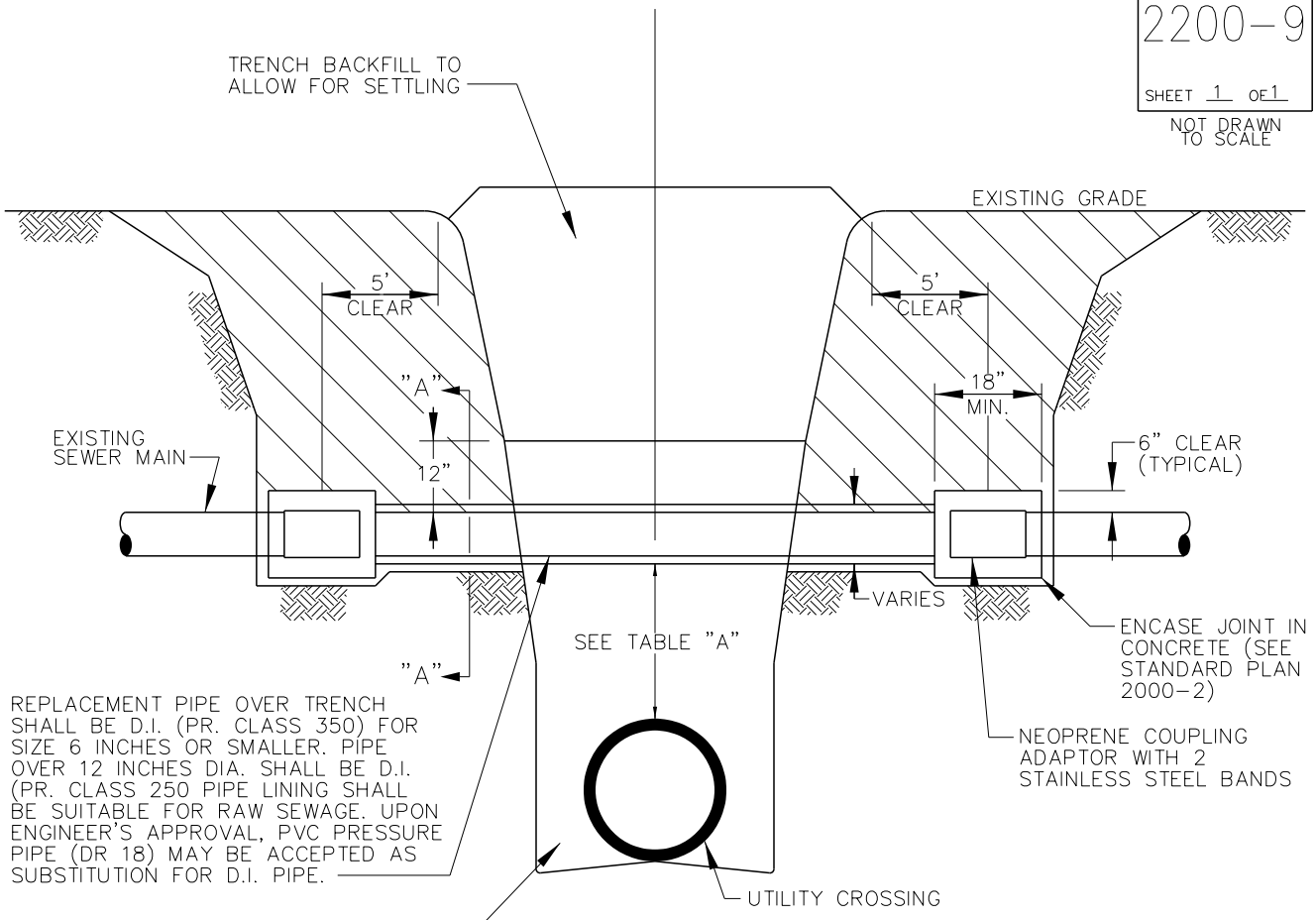
REVISED: RP

STANDARD PLAN

2200–9

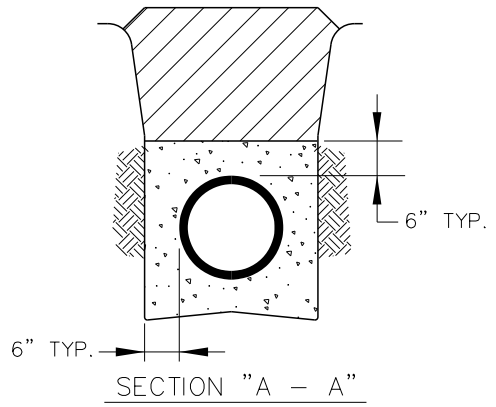
SHEET 1 OF 1

NOT DRAWN TO SCALE



NOTE:
LESS THAN MINIMUM CLEARANCE WILL REQUIRE CONCRETE CRADLE. UNDER NO CIRCUMSTANCES SHALL CLEARANCE BE LESS THAN 8" FROM THE PIPE AND/ OR BELL TO PIPE AND/ OR BELL.

TABLE A	
UTILITY	MINIMUM CLEARANCE
STORM DRAIN	1'
ELECTRICAL	1'
GAS	1'
MINIMUM	1'



SECTION "A – A"

NOTE:
IF TRENCH WIDTH OR DIAGONAL CROSSING EXCEEDS SIX FEET (6') A UTILITY SUPPORT SHALL BE USED. IF THE CROSSING EXCEEDS TWENTY FIVE FEET (25') A SPECIAL DESIGN AS RECOMMENDED BY THE ENGINEER SHALL BE USED.

CITY OF SHREVEPORT

SEWER MAIN CROSSING

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

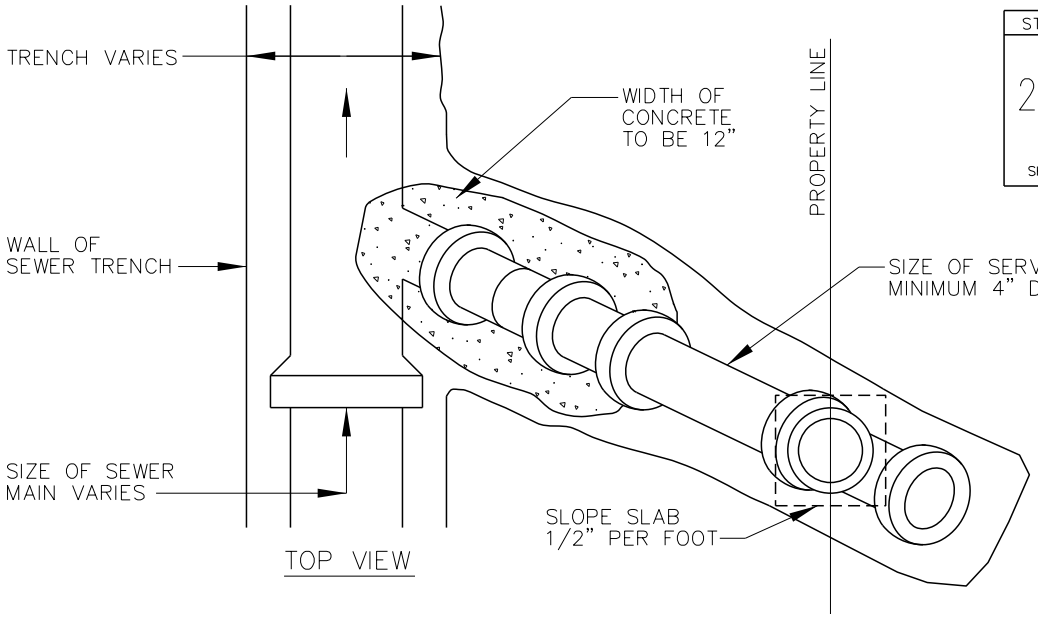
DRAWN: Nhan Tran
CHECKED: EES
APPROVED: KAP
REVISED: RP

STANDARD PLAN

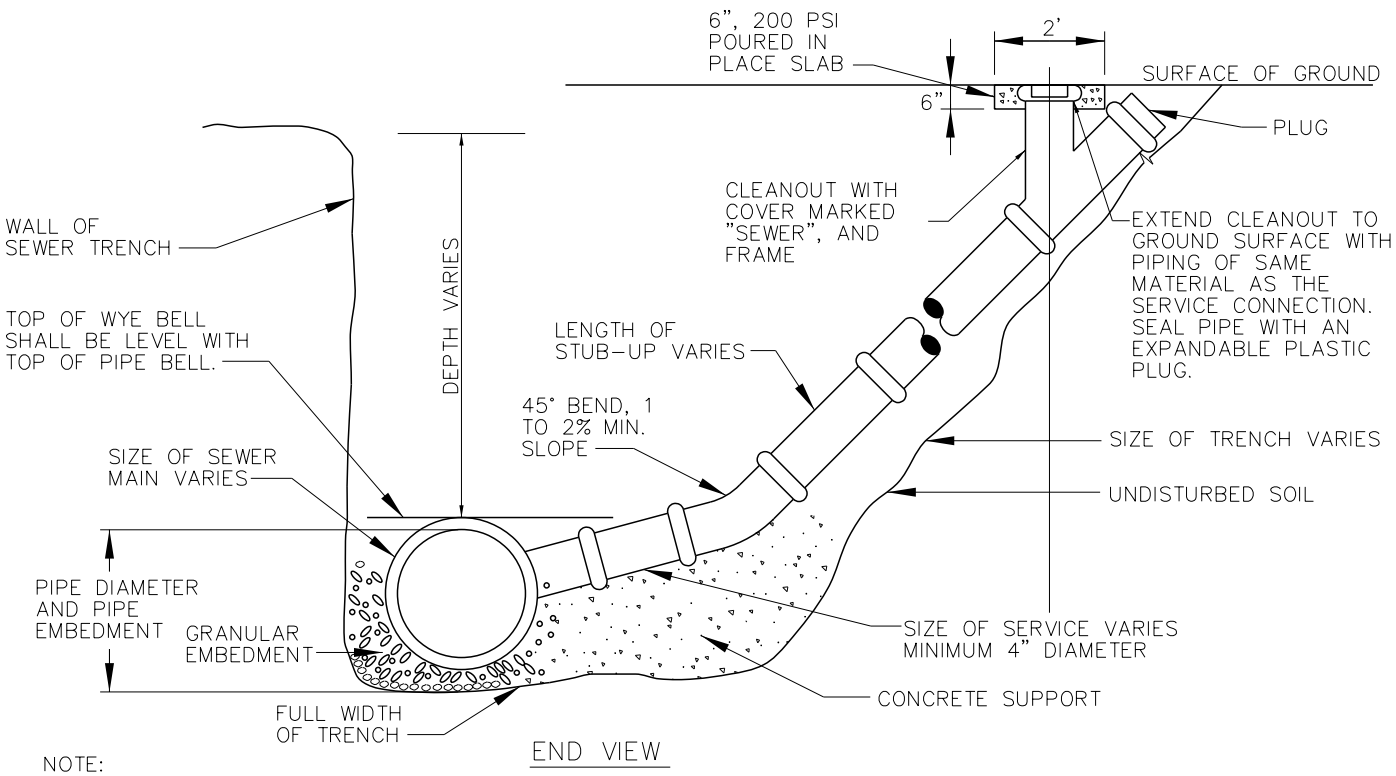
2200-10

SHEET 1 OF 1

NOT DRAWN TO SCALE



TOP VIEW



END VIEW

NOTE:

1. NEW SEWER MAIN CONSTRUCTION REQUIRES ALL SEWER SERVICES TO BE EXTENDED TO THE PROPERTY LINE.
2. HEIGHT OF CONCRETE SUPPORT TO BE DETERMINED BY THE O.D. OF THE SEWER MAIN.
3. UNDER NEW CONSTRUCTION, SEWER SERVICES SHALL BE TESTED WITH THE NEW GRAVITY SEWER MAIN AS SPECIFIED IN SPECIFICATION SECTION 2000.
4. SERVICE LATERAL LINES TO BE INSTALLED AT A MINIMUM OF 1% SLOPE.
5. SEWER MAIN TAP SHALL MATCH THE TAPPING SADDLE'S APRON AND LOCATING RING. DEBURR TAP PRIOR TO SADDLE INSTALLATION.
6. SERVICE LATERALS SHALL BE COMPATIBLE WITH SEWER MAIN MATERIAL AND SHALL SHALL NOT CAUSE GALVANIC CORROSION.
7. USE OF HUBS IN LIEU OF SERVICE LATERAL PLUGS IS NOT ACCEPTABLE.
8. MAXIMUM VERTICAL ADJUSTMENT OF WYES OR SADDLES SHALL BE LIMTED TO 45°.
9. SERVICE TAPS ON HDPE SHALL BE INSTALLED USING ELECTRO FUSION BONDING PROCESS.

CITY OF SHREVEPORT

TYPICAL SEWER SERVICE CONNECTION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

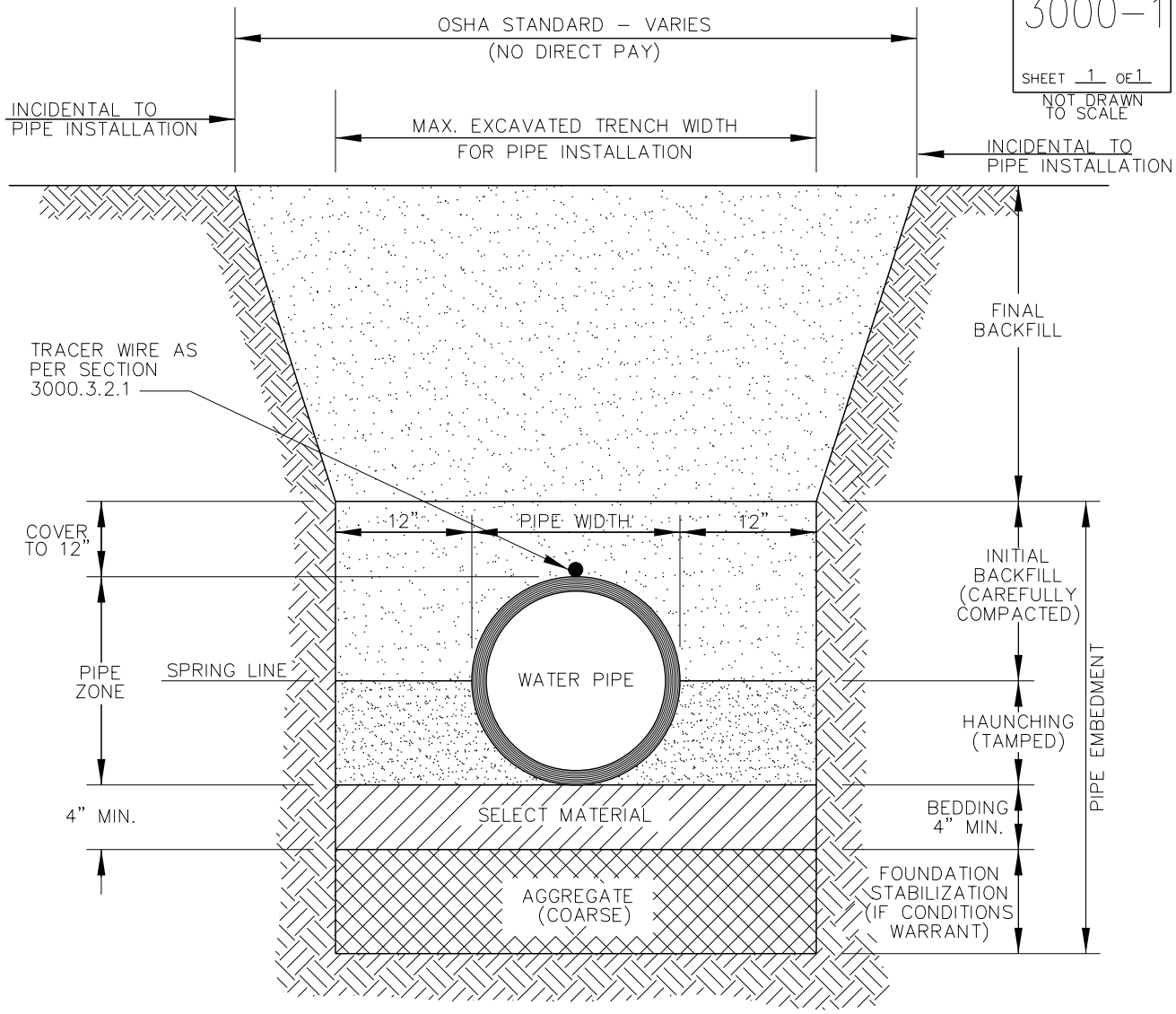
REVISED: RP

STANDARD PLAN

3000-1

SHEET 1 OF 1

NOT DRAWN TO SCALE



NOTE:

1. BACKFILL SHALL BE FINELY DIVIDED MATERIAL, FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO STANDARD METHOD T-99.
2. INITIAL BACKFILL IS DEFINED AS NATIVE SOIL, FREE OF ROCK, FOREGIN MATERIAL AND FROZEN EARTH.
3. SELECT MATERIAL IS DEFINED AS LOOSE NON-COHESIVE FINE GRAINED FILL.
4. COARSE AGGREGATE BACKFILL IS DEFINED AS MANUFACTURED ANGULAR AGGREGATE MATERIAL SUCH AS CRUSHED STONE OR ROCK.
5. PIPE BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH THESE MINIMUM STANDARDS OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURE, WHICHEVER IS MORE STRINGENT.
6. IMPORTED BACKFILL SHALL BE PAID AT THE CONTRACT UNIT BID RATE. PAID VOLUME IS LIMITED TO THE MAXIMUM TRENCH WIDTH.
7. SEE SPECIFICATION SECTION 1002 FOR EXCAVATION AND BACKFILL REQUIREMENTS.
8. WATER MAINS SHALL BE INSTALLED PER THE REQUIREMENTS OF SPECIFICATION SECTION 209 AND 3000.

CITY OF SHREVEPORT

WATER MAIN PIPE EMBEDMENT / BACKFILL

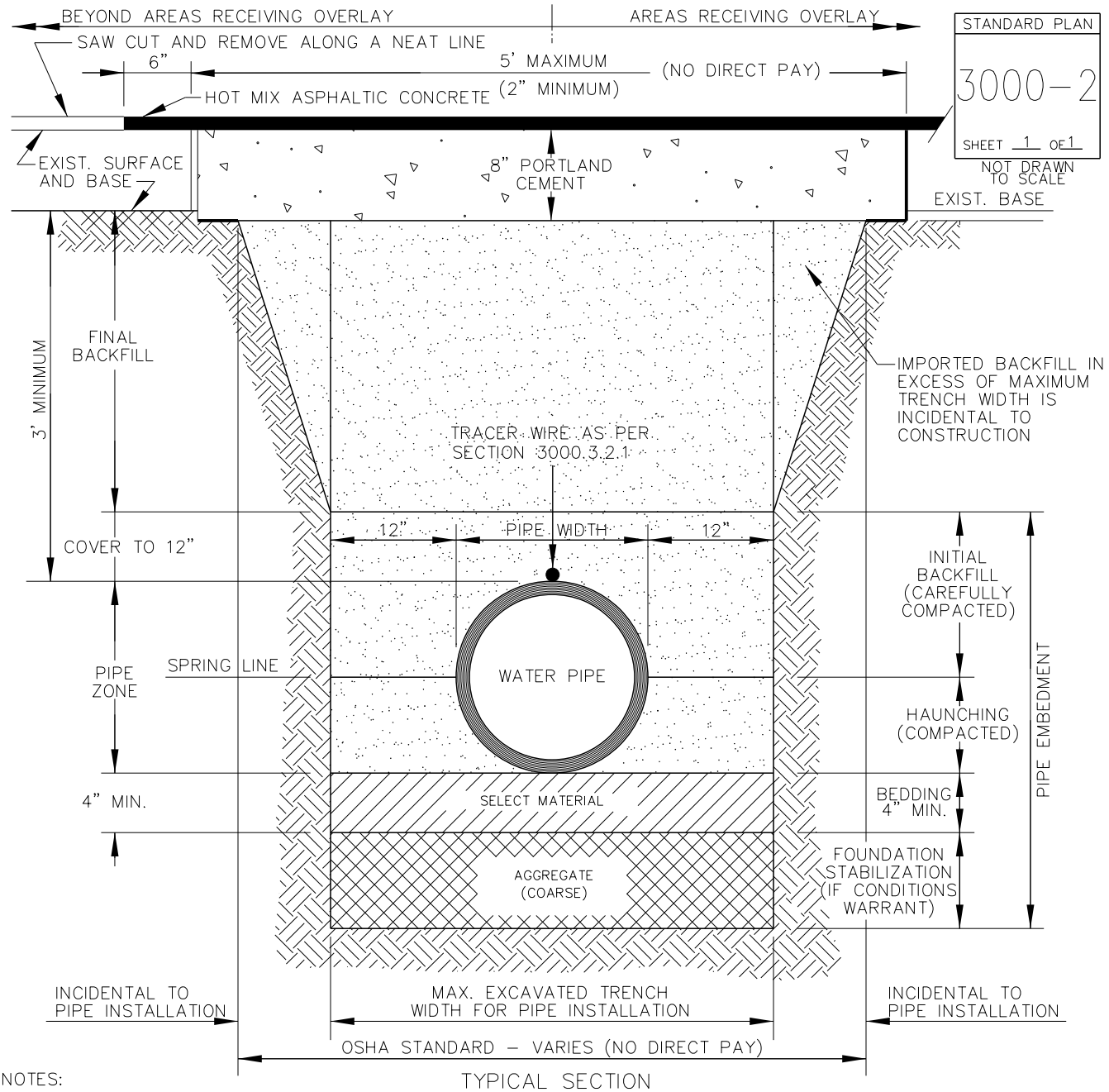
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

REVISED: RP



TYPICAL SECTION

STANDARD PLAN

3000–2

SHEET 1 OF 1

NOT DRAWN TO SCALE

NOTES:

1. BACKFILL SHALL BE FINELY DIVIDED MATERIAL, FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO STANDARD METHOD T–99.
2. INITIAL BACKFILL IS DEFINED AS NATIVE SOIL, FREE OF ROCK, FOREGIN MATERIAL AND FROZEN EARTH.
3. SELECT MATERIAL BACKFILL IS DEFINED AS LOOSE NON–COHESIVE FINE GRAINED FILL.
4. COARSE AGGREGATE BACKFILL IS DEFINED AS MANUFACTURED ANGULAR AGGREGATE MATERIAL SUCH AS CRUSHED STONE OR ROCK.
5. PIPE BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH THESE MINIMUM STANDARDS OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURE, WHICHEVER IS MORE STRINGENT.
6. IMPORTED BACKFILL SHALL BE PAID AT THE CONTRACT UNIT BID RATE. PAID VOLUME IS LIMITED TO THE MAXIMUM TRENCH WIDTH.
7. SEE SPECIFICATION SECTION 1010 FOR EXCAVATION AND BACKFILL REQUIREMENTS.
8. WATER MAINS SHALL BE INSTALLED PER THE REQUIREMENTS OF SPECIFICATION SECTION 209 AND 3000.

CITY OF SHREVEPORT

WATER MAIN PIPE EMBEDMENT / BACKFILL AND PAVEMENT REPLACEMENT

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

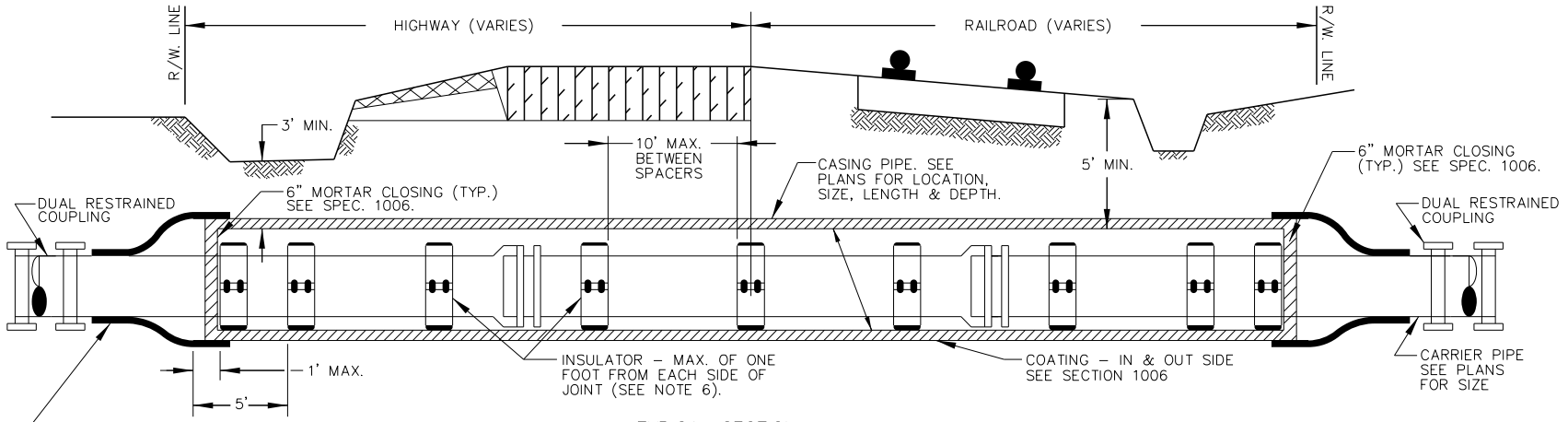
REVISED: RP

CITY OF SHREVEPORT

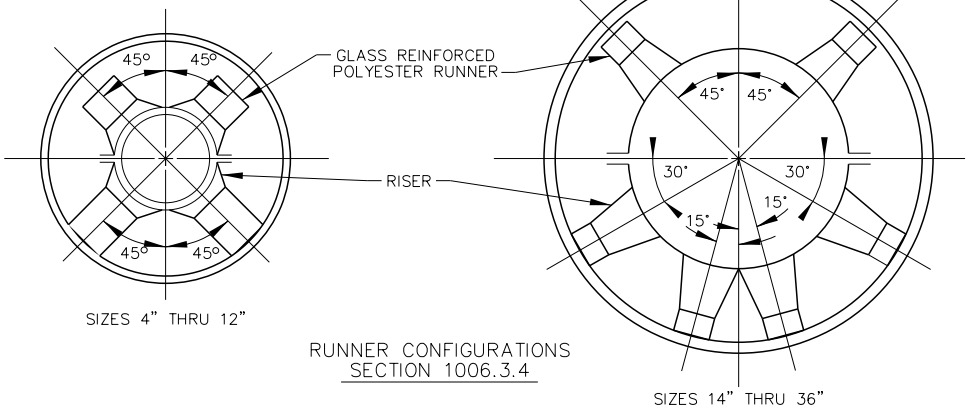
TYPICAL CASING & CARRIER PIPE INSTALLATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

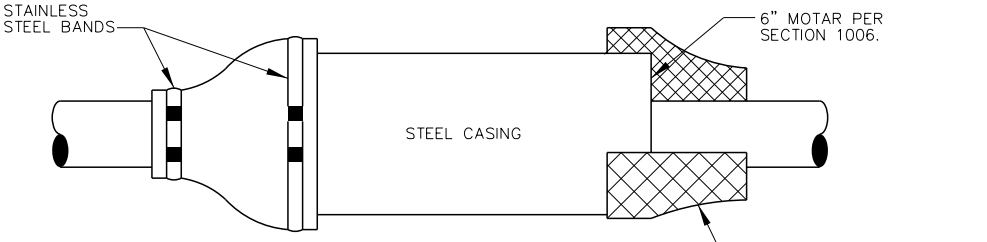
DRAWN: Nhan Tran
CHECKED: EES
APPROVED: KAP
REVISED: RP



TYPICAL SECTION



RUNNER CONFIGURATIONS
SECTION 1006.3.4



END SEALS

NOTES:

1. CROSSING TO BE IN STRICT ACCORDANCE WITH RAILROAD AND HIGHWAY SPECIFICATIONS. AND SHALL MEET ALL REQUIREMENTS OF LOCAL GOVERING AUTHORITY AND THESE SPECIFICATIONS.
2. IF STATE OR US. HWY. CROSSINGS, CASING SHALL EXTEND FULL WIDTH OF RIGHT OF WAY.
3. FIELD CONDITIONS MAY WARRANT CHANGES, WITH APPROVAL OF AN ENGINEER.
4. CASING SPACERS SHALL BE MANUFACTURED STAINLESS STEEL OR STEEL FACTORY COATED WITH A FUSION BONDED COATING.
5. SPACING SHALL BE AS SHOWN ON DRAWING WITH MAXIMUM DISTANCE BETWEEN SPACERS TO BE 10 FEET FOR PIPE SIZES 4" – 14", 8 FEET FOR PIPE SIZES 16" – 36". FOR PIPE LARGER THAN 36" DIA., CONSULT WITH MANUFACTURER.
6. CASING INSULATOR WIDTH SHALL BE 8" FOR PIPE SIZES 4" – 14", 12" FOR PIPE SIZES 30". OTHER PIPE SIZES (SEE SECTION 1006.3.3).
7. SPECIAL REQUIREMENTS FOR NON – SMOOTH CASING ID'S AND CROSSINGS IN EXCESS OF 300 FEET LONG. CONSULT WITH MANUFACTURER.
8. CONSULT WITH PIPE MANUFACTURER TO ASSURE PROPER SUPPORT OF PIPE.
9. CONTRACTOR TO SUBMIT MATERIAL PROPOSAL FOR PRIOR ENGINEER APPROVAL.
10. ALTERNATE METHODS OF CASING SPACERS (PIPE SKIDS) MAY NOT BE UTILIZED WITHOUT PRIOR WRITTEN APPROVAL OF ENGINEER.
11. SEE SECTION 1006.3.2 FOR GROUTING CASING PIPE.

NOT DRAWN TO SCALE

STANDARD PLAN

3000-3

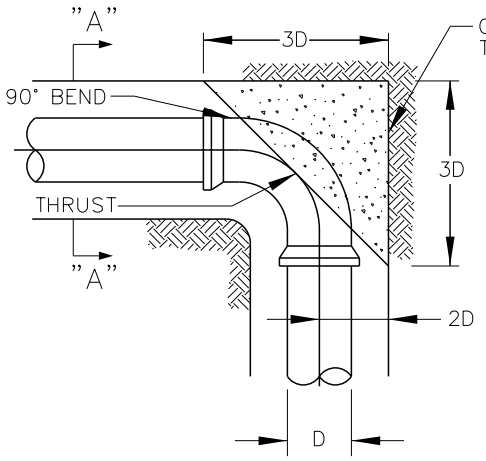
SHEET 1 OF 1

STANDARD PLAN

3000–4

SHEET 1 OF 3

NOT DRAWN TO SCALE

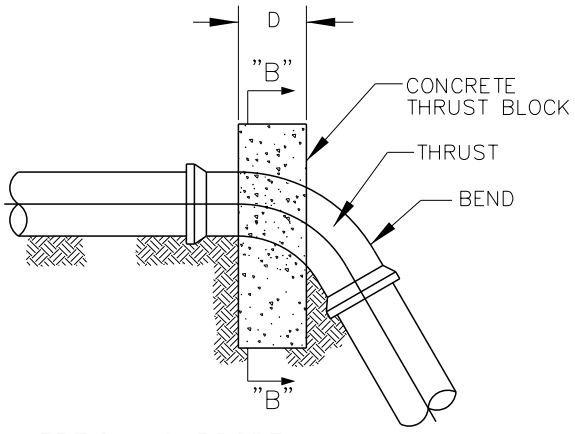


TYPICAL BLOCKING
FOR BENDS 45° – 90°

SECTION "A" SEE STANDARD PLAN 3000–6

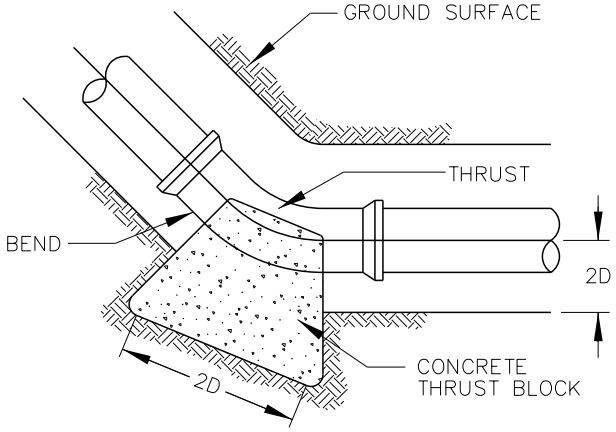
MINIMUM SQ. FT. BEARING AREA AGAINT UNDISTURBED SOIL REQUIRED FOR BLOCKING BENDS				
PIPE DIA.	BEND "DEGREES"			
	90	45	22 1/2	11 1/4
6"	3	2	1	1
8"	5	3	1	1
10"	8	5	2	1
12"	12	6	3	2
16"	21	12	6	3
18"	27	15	7	4
20"	33	18	9	5
24"	48	26	13	7
30"	75	41	21	10
36"	108	58	30	15

1. SOIL BEARING CAPACITY BASED ON 3000 LB./SF.
2. MAXIMUM PRESSURE 150 PSI. (INCL SURGE) AND A SAFETY FACTOR OF 1.5.
3. FOR OTHER SOIL BEARING PRESSURE AND PIPE PRESSURE CONDITIONS, CONSULT THE ENGINEER OF RECORD.



VERTICAL SUPPORT
FOR BENDS

SECTION "B" SEE STANDARD PLAN 3000–6



TYPICAL BLOCKING
FOR BENDS < 45°

NOTES:

1. FOR PIPES 6" IN DIAMETER AND SMALLER THE "D" DIMENSION SHALL NOT BE LESS THAN 6".
2. CONCRETE THRUST BLOCK SHALL NOT LIMIT FLEXIBILITY OF JOINTS AND OTHER FITTINGS.
3. CONCRETE THRUST BLOCK SHALL BE CLASS "A" CONCRETE PER SPEC. 201.

CITY OF SHREVEPORT

THRUST BLOCKING DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

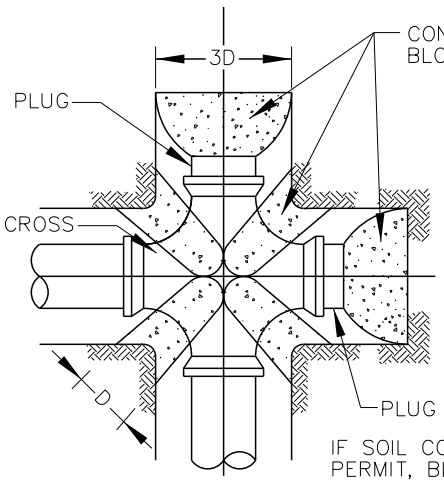
REVISED: RP

STANDARD PLAN

3000-5

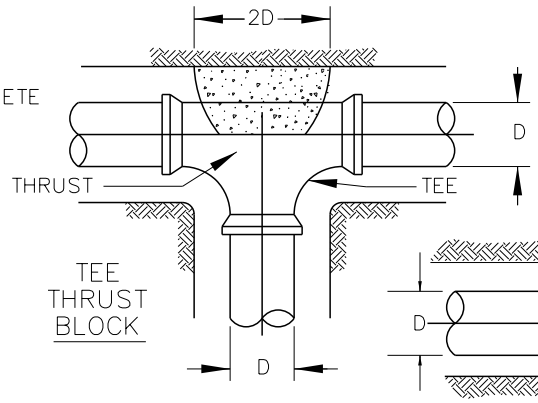
SHEET 2 OF 3

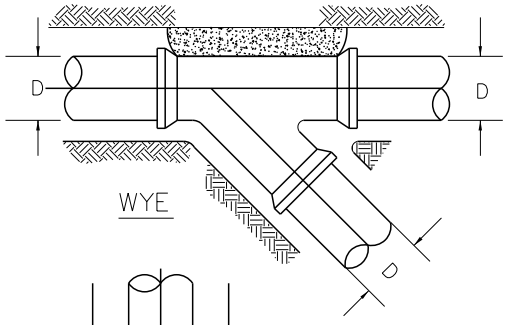
NOT DRAWN TO SCALE

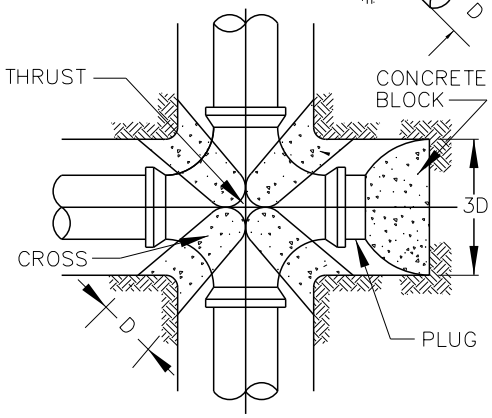


IF SOIL CONDITIONS PERMIT, BLOCKING ON PLUGS ONLY AT CROSSING WILL BE SUFFICIENT.

TYPICAL THRUST BLOCK CROSS AND TWO PLUGS



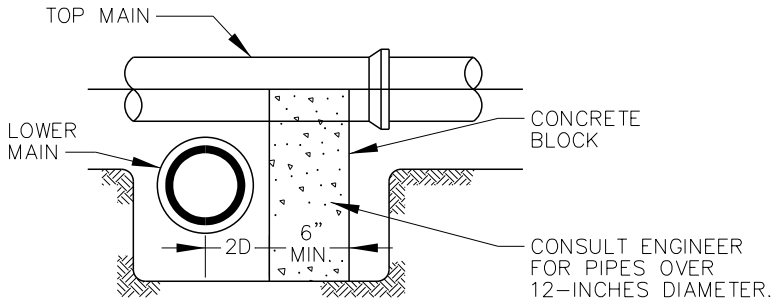




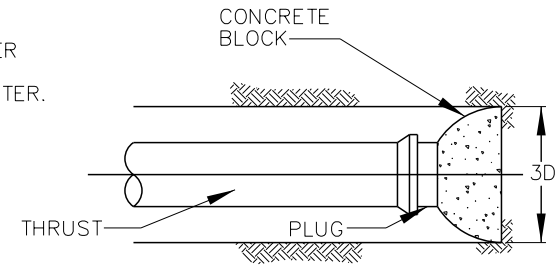
IF SOIL CONDITIONS PERMIT, BLOCKING ON PLUGS ONLY AT CROSSINGS WILL BE SUFFICIENT.

TYPICAL THRUST BLOCK OF CROSS AND PLUG

WHEN CROSSING NEAR BELL OF TOP MAIN, USE SUPPORT AS SHOWN. FOR CROSSINGS NEAR CENTER OF SPAN, USESUPPORT ON EACH SIDE OF PIPE.



PIPE SUPPORT AT CROSSING OF MAINS



PLUG THRUST BLOCK

REQUIRED BEARING AREA ON UNDISTURBED SOIL AND TYPICAL DIMENSIONS	
TEES WYES & PLUGS	
SIZE	AREA SQ. FT.
6"	2
8"	4
10"	6
12"	8
14"	12
16"	15
18"	19
20"	24
24"	34
36"	76

NOTES:

1. THRUST BLOCKING SHALL NOT LIMIT FLEXIBILITY OF JOINTS AND OTHER FITTINGS.
2. THRUST BLOCKS FOR TEES SHALL EXTEND TO THE FULL LENGTH OF THE TEE.
3. BLOCKING SHALL BE CLASS "A" CONCRETE, PER SPECIFICATION SECTION 201.
4. SURFACE AREA OF BEARING SOIL IS PROVIDED FOR 150 PSI MAXIMUM PRESSURE (INCLUDING SURGE), SAFETY FACTOR OF 1.5.AND 3000 LB./SF. SOIL BEARING PRESSURE. IF PRESSURE IS HIGHER OR SOIL BEARING IS POTENTIALLY LOWER, CONSULT THE SOIL BEARING IS POTENTIALLY LOWER, CONSULT THE ENGINEER FOR ADJUSTMENTS.

CITY OF SHREVEPORT

THRUST BLOCK DETAILS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

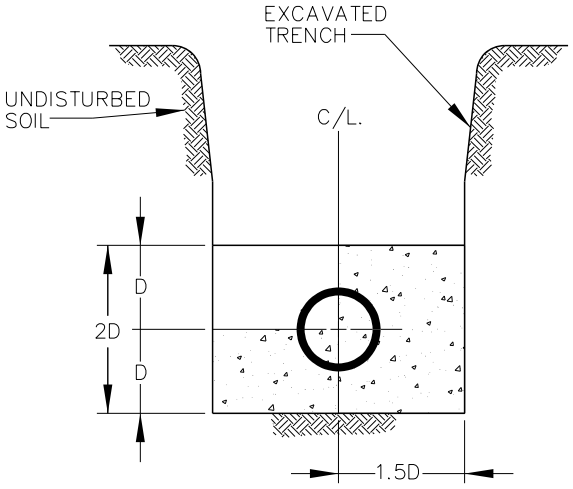
REVISED: RP

STANDARD PLAN

3000–6

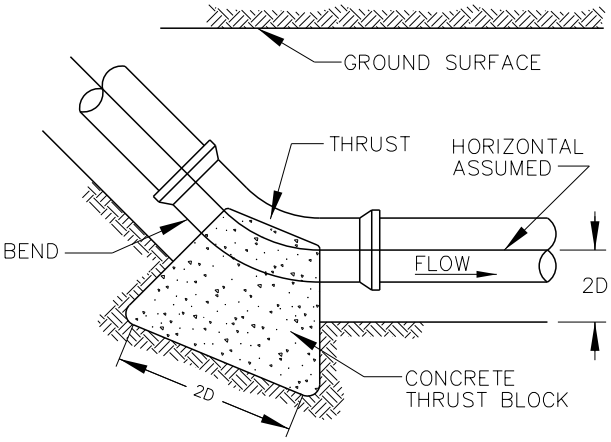
SHEET 3 OF 3

NOT DRAWN TO SCALE

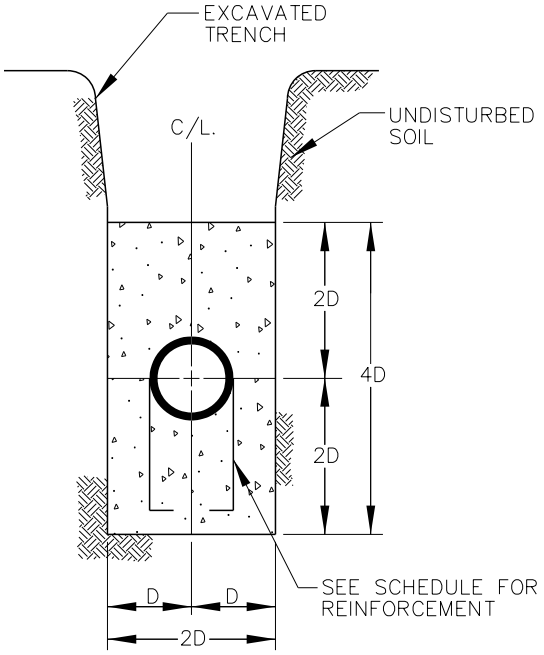


SECTION "A – A"

(SEE STANDARD PLAN SHEET 3000–4)



UNDER BREAK FOR VERTICAL PIPING



SECTION "B – B"

(SEE STANDARD PLAN SHEET 3000–4)

REINFORCEMENT SCHEDULE

VERTICAL THRUST UP (11 1/4° TO 90°)					
PIPE DIAMETER	11 1/4° TO 22 1/2°		45° TO 90°		HOOKS (EA. END)
	NO. BARS	SIZE BARS	NO. BARS	SIZE BARS	
10" OR LESS	1	#4	2	#4	4"
12" TO 18"	2	#4	2	#5	6"
20" TO 36"	2	#5	2	#6	8"

CITY OF SHREVEPORT

THRUST BLOCK DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

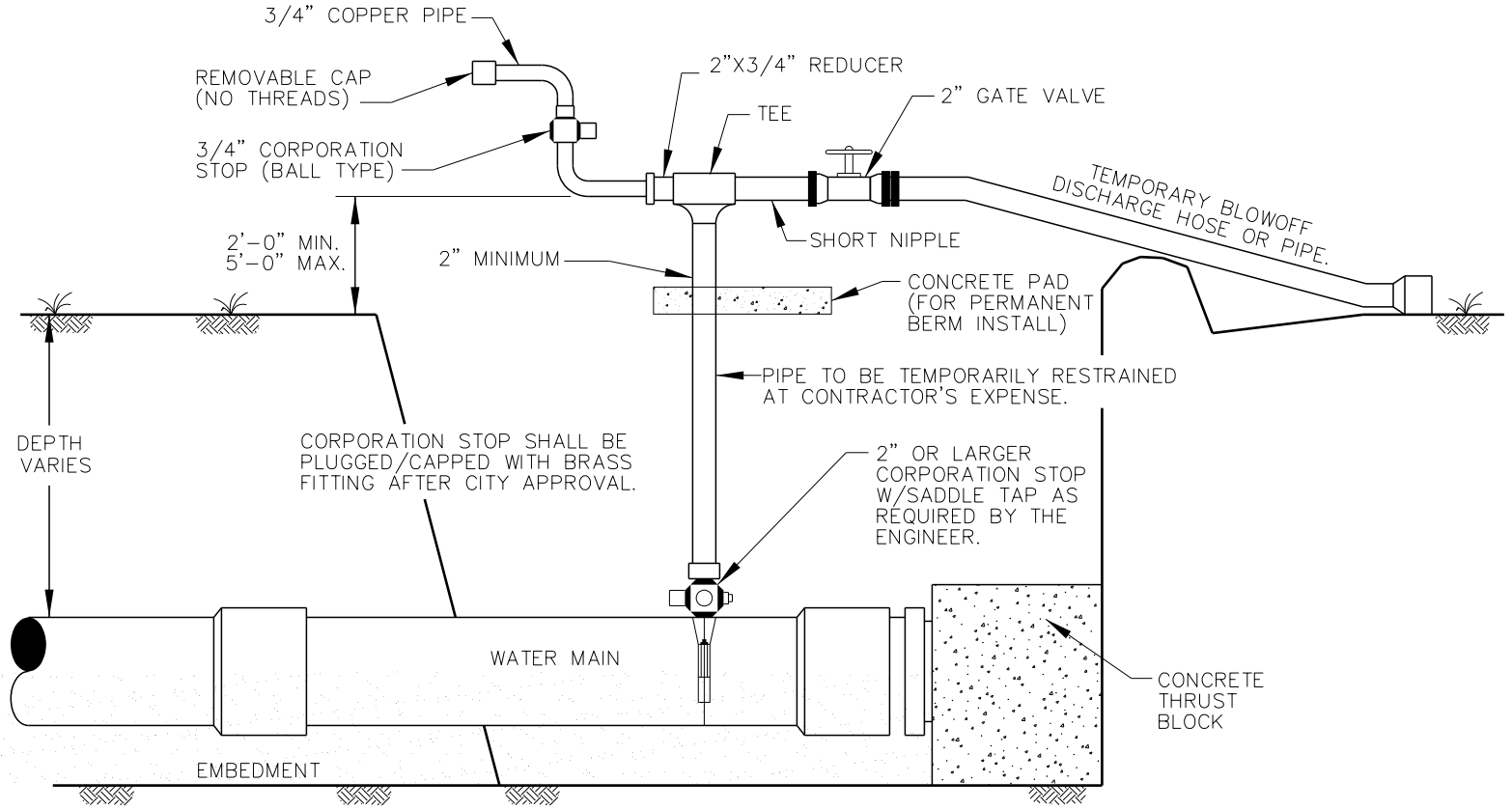
APPROVED: KAP

REVISED: RP

CITY OF SHREVEPORT

SAMPLING POINT AND TAP

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS



NOTES:

1. ALL APPURTENANCES TO BE MANUFACTURED OF BRASS AND COPPER OR AN APPROVED EQUAL.
2. WATER DISCHARGED INTO THE CITY'S MUNICIPAL STORMWATER DRAINAGE SYSTEM SHALL MEET EPA, DEQ AND CITY STORMWATER REGULATIONS.
3. WATER SHALL BE KEPT OUT OF PIT.
4. TYPE AND/ OR AMOUNT OF CONCRETE THRUST OR PIPE RESTRAINT REQUIRED SHALL BE DETERMINED BY THE CONTRACTOR. THRUST BLOCKS OR PIPE RESTRAINTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL SUBMIT TESTING, CLEANING BLOCK AND STERILIZATION PLAN INCLUDING MATERIALS AND METHODS FOR APPROVAL.
6. CONTRACTOR MAY ELECT TO USE AN ENGINEER APPROVED SAMPLING TAP ASSEMBLY.
7. TEMPORARY INSTALLATION SHOWN. FOR PERMANENT INSTALLATIONS, THE SAMPLING LINE SHALL BE INSTALLED IN A 6 INCH DIAMETER ALUMINUM OR FIBERGLASS HOUSING. HOUSING SHALL BE FILLED WITH SAND. HOUSING SHALL ALSO INCLUDE A COVER WITH FLUSH MOUNTED LOCK.

DRAWN: Nhan Tran
CHECKED: EES
APPROVED: KAP
REVISED: RP

STANDARD PLAN

3100-1

SHEET 1 OF 1

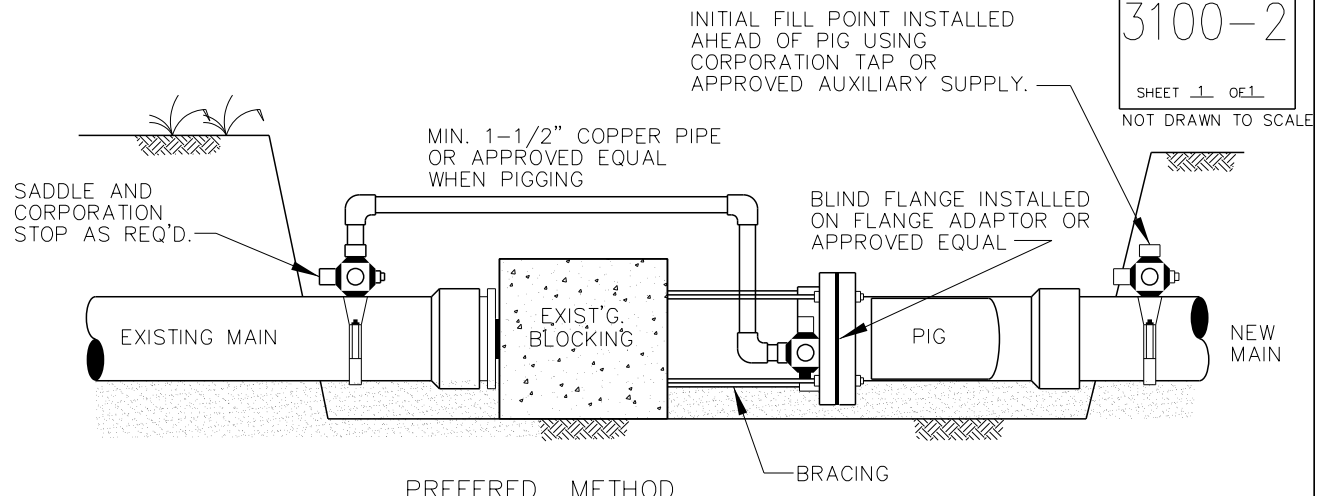
NOT DRAWN TO SCALE

STANDARD PLAN

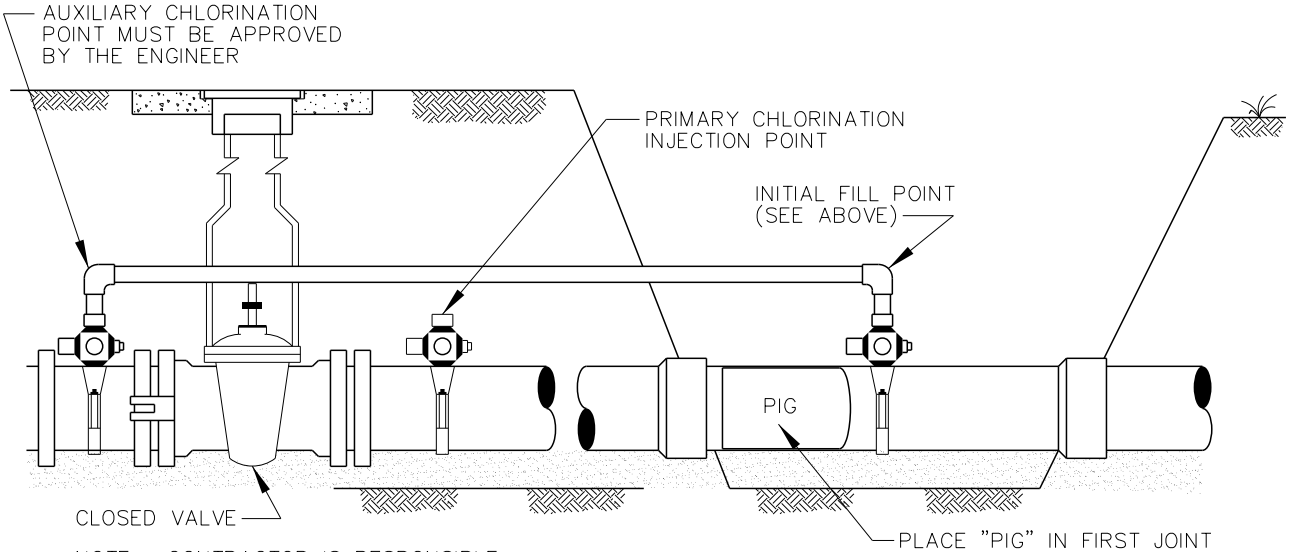
3100–2

SHEET 1 OF 1

NOT DRAWN TO SCALE



PREFERED METHOD



NOTE: CONTRACTOR IS RESPONSIBLE TO VERIFY HYDROSTATIC SOUNDNESS OF VALVE.

ALTERNATIVE METHOD

NOTES:

1. THE ENTIRE LINE SHALL BE FILLED WITH WATER BY AN AUXILIARY FILL POINT OR BY USING AN AUXILIARY TAP IN FRONT OF THE PIG. (AS SHOWN)
2. A PIG SHALL BE PLACED IN THE FIRST JOINT OF EACH PIPE SEGMENT TO BE CLEANED.
3. SINCE PROPELLING OF "PIG" THROUGH PIPE FITTINGS MAY REQUIRE UP TO FULL SYSTEM PRESSURE, ADEQUATE BLOCKING MUST BE PROVIDED.
4. CLOSE NECESSARY VALVES TO ISOLATE PIPE SEGMENTS.
5. CONTRACTOR IS RESPONSIBLE FOR "PIGGING" MAINS IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 3100 AND OTHER PERTINENT SPECIFICATIONS.
6. "PIGS" OR "SWABS" SHALL NOT BE REUSED.
7. ALL APPURTENANCES AND ASSOCIATED PIPING USED FOR PIGGING USED FOR PIGGING OPERATIONS SHALL BE MANUFACTURED OF BRASS AND COPPER OR AN APPROVED EQUAL.

CITY OF SHREVEPORT

TYPICAL PIGGING DETAIL (WATERMAIN)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

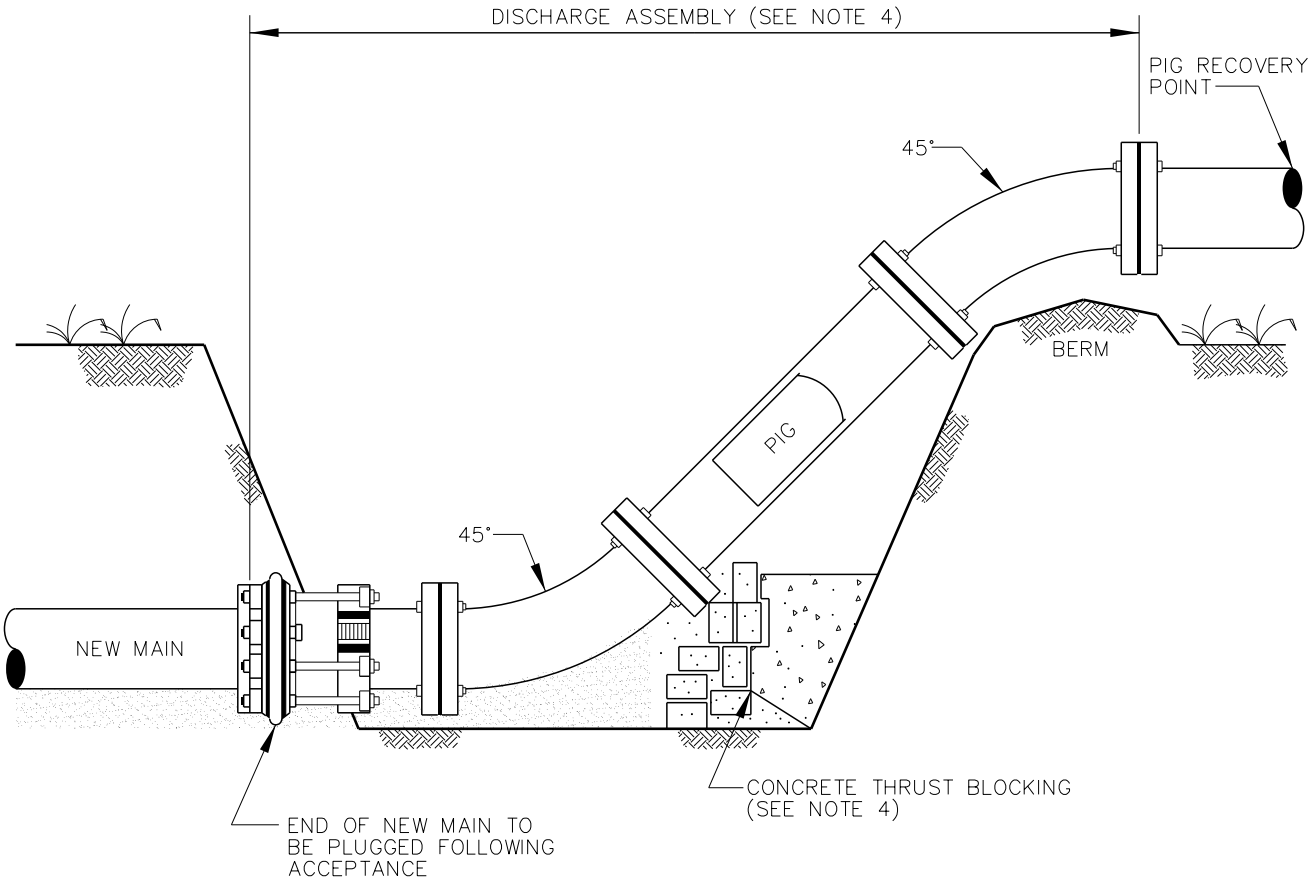
REVISED: RP

STANDARD PLAN

3100-3

SHEET 1 OF 1

NOT DRAWN TO SCALE



NOTES:

1. AFTER "PIGGING" AND FLUSHING" NEW MAIN MAY REQUIRE A PERMANENT PLUG PRIOR TO STERILIZATION.
2. IF CONDITIONS WARRANT, ENGINEER MAY REQUIRE ADDITIONAL PIGGING.
3. WATER SHALL BE KEPT OUT OF PIT.
4. PIPE ASSEMBLY, AMOUNT OF CONCRETE THRUST BLOCK, AND/ OR RESTRAINT SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. WATER DISCHARGED INTO THE CITY'S MUNICIPAL STORMWATER DRAINAGE SYSTEM SHALL MEET EPA, DEQ AND CITY'S STORMWATER REGULATIONS.

CITY OF SHREVEPORT

PIGGING DISCHARGE ASSEMBLY (WATERMAIN)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

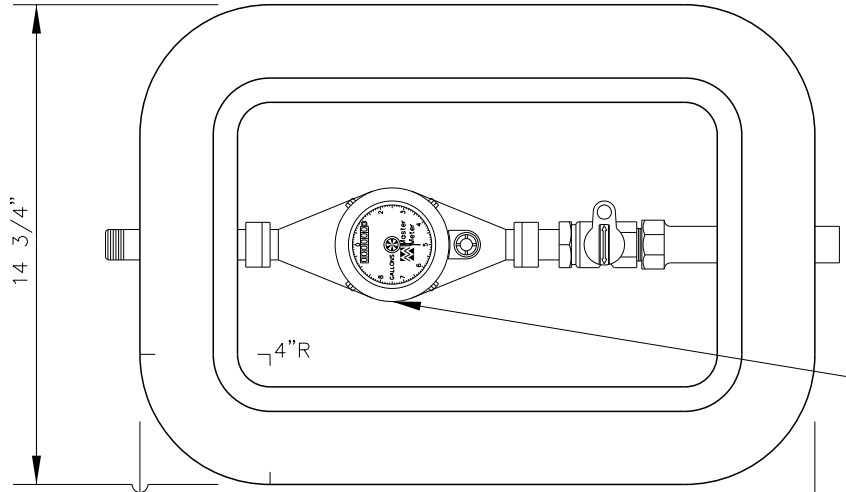
REVISED: RP

STANDARD PLAN

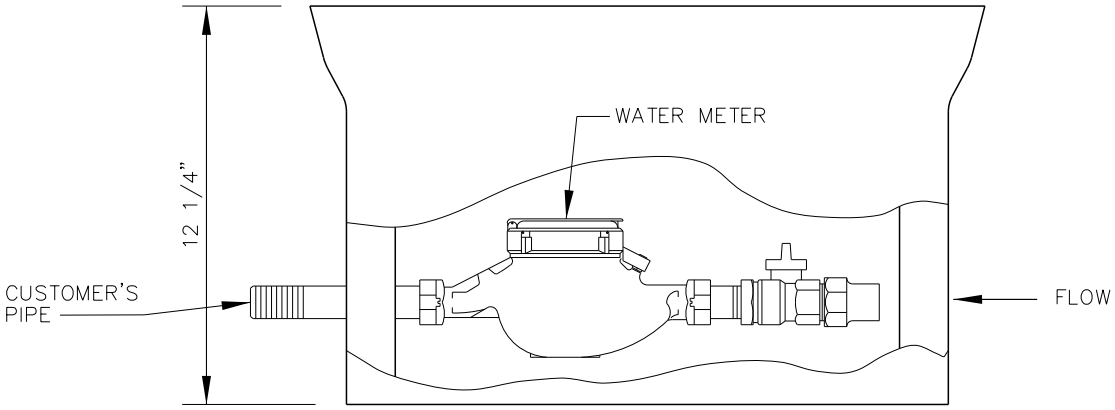
3200-1

SHEET 1 OF 3

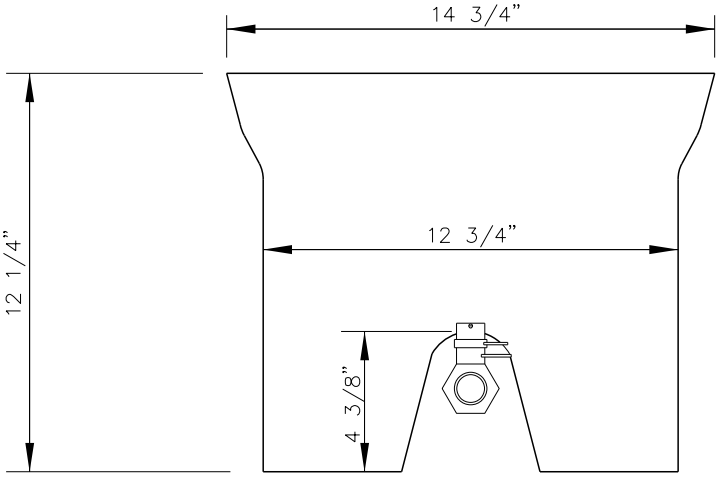
NOT DRAWN TO SCALE



TOP VIEW



FRONT ELEVATION



SIDE ELEVATION

NOTES:

1. WATER METER STANDARD PLANS PERTAIN TO SERVICE LINES 3/4 INCH TO 2 INCHES IN DIAMETER.
2. FITTINGS AND METER BOXES SHALL BE BE PER CITY OF SHREVEPORT'S STANDARD SPECIFICATION SECTION 209 AND 3200.

CITY OF SHREVEPORT

TYPICAL WATER METER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

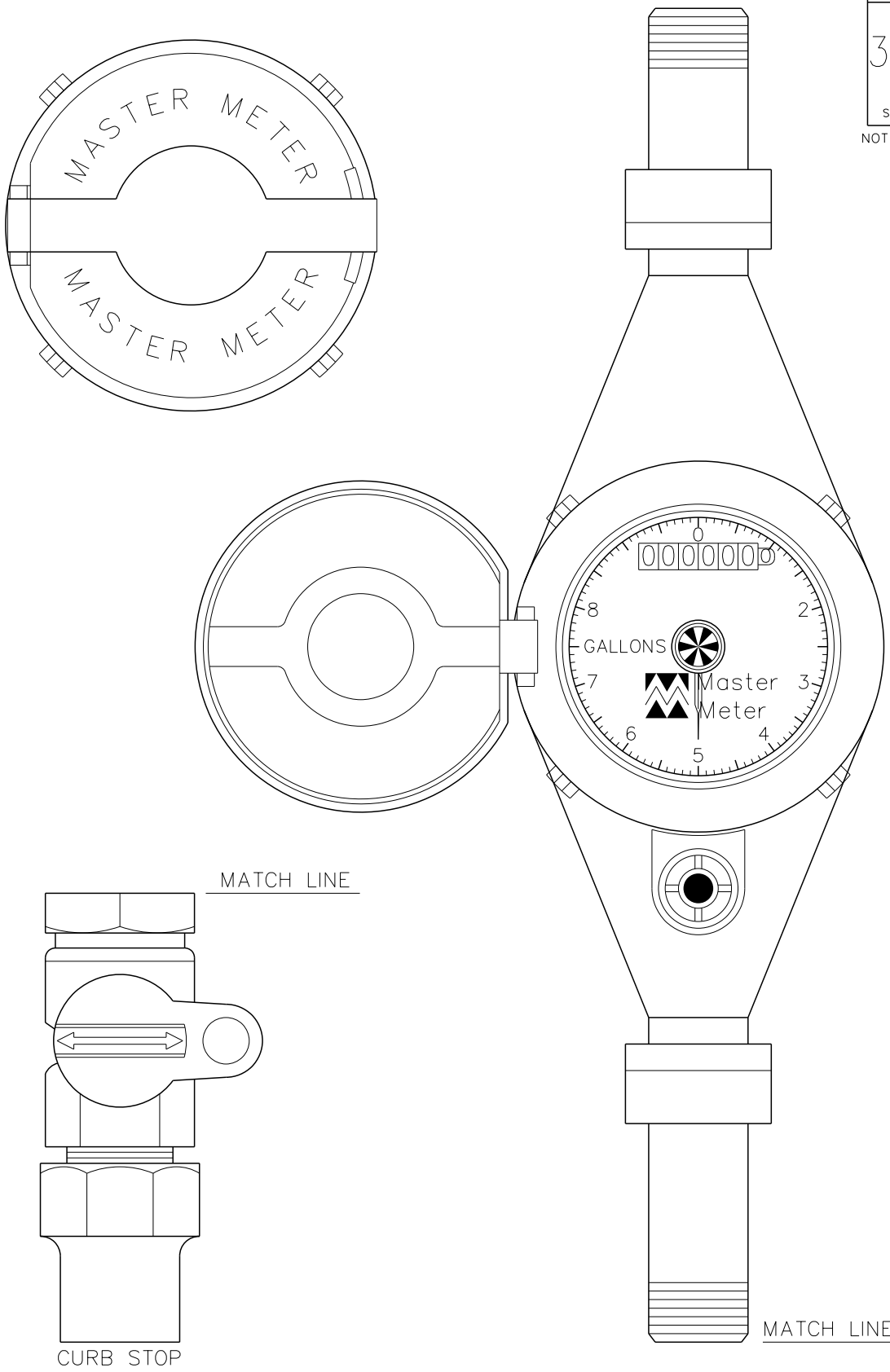
REVISED: RP

STANDARD PLAN

3200-2

SHEET 2 OF 3

NOT DRAWN TO SCALE



CITY OF SHREVEPORT

TYPICAL WATER METER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

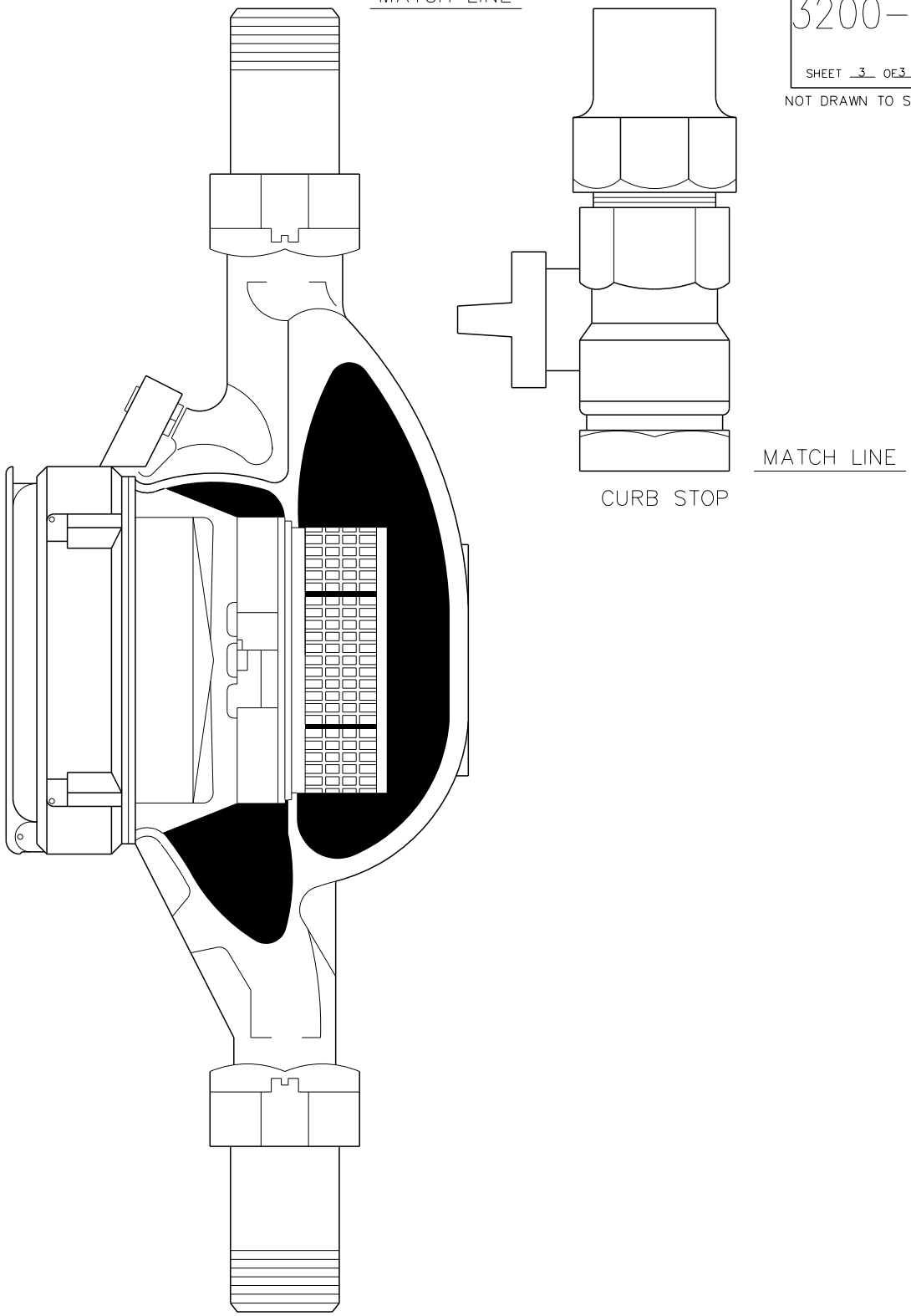
REVISED: RP

STANDARD PLAN

3200-3

SHEET 3 OF 3

NOT DRAWN TO SCALE



CITY OF SHREVEPORT

TYPICAL WATER METER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

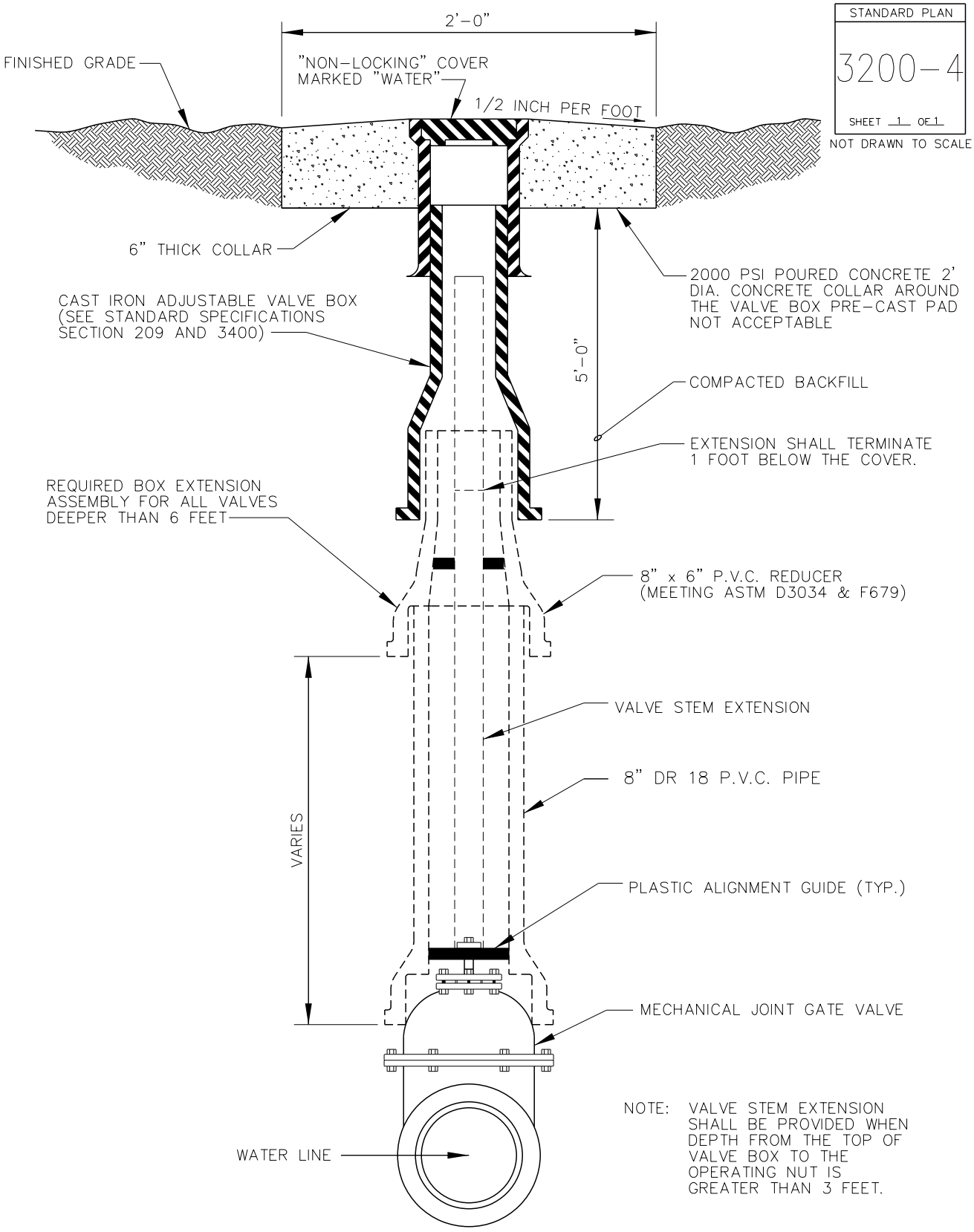
REVISED: RP

STANDARD PLAN

3200-4

SHEET 1 OF 1

NOT DRAWN TO SCALE



NOTE: VALVE STEM EXTENSION SHALL BE PROVIDED WHEN DEPTH FROM THE TOP OF VALVE BOX TO THE OPERATING NUT IS GREATER THAN 3 FEET.

CITY OF SHREVEPORT

TYPICAL VALVE BOX DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

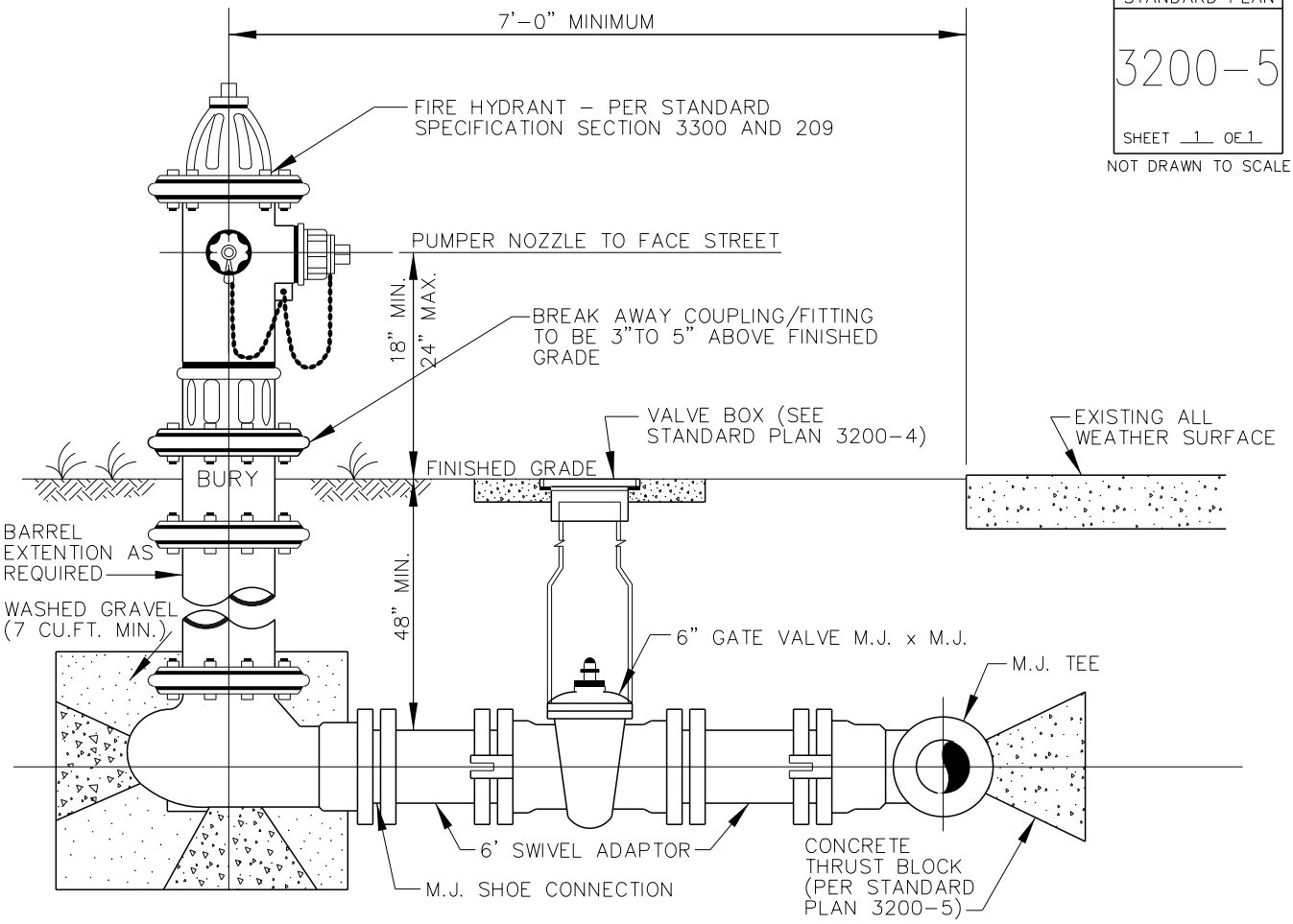
REVISED: RP

STANDARD PLAN

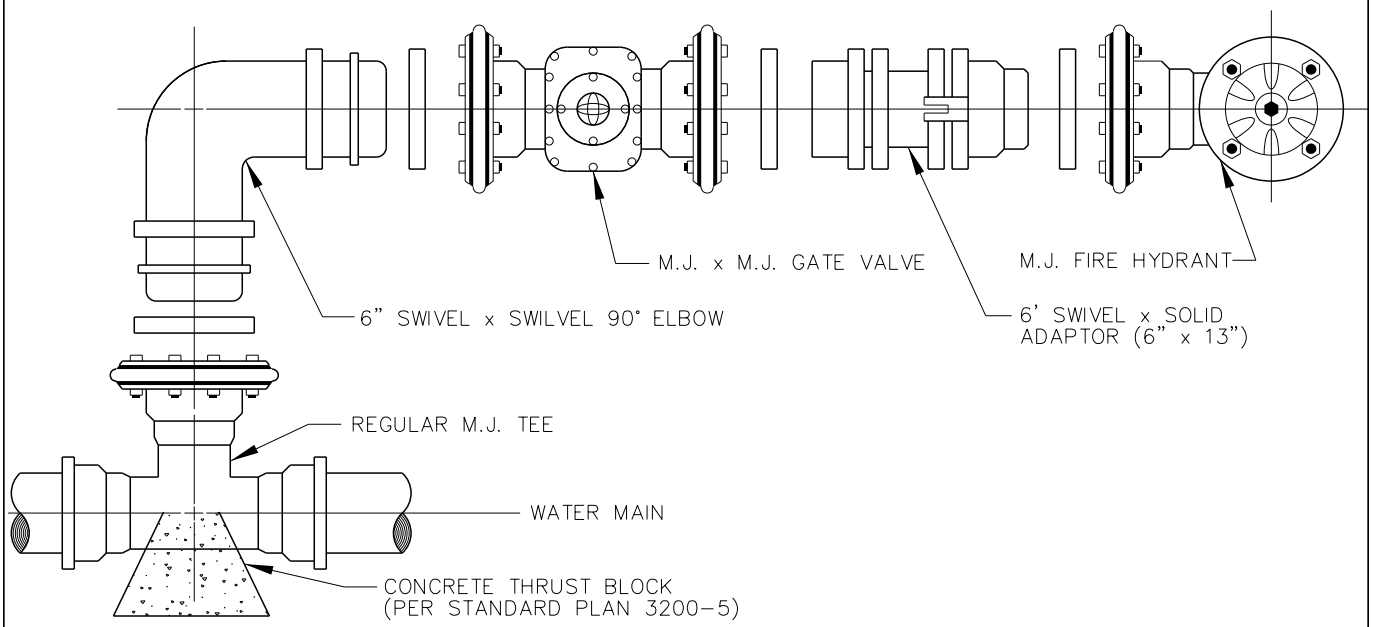
3200-5

SHEET 1 OF 1

NOT DRAWN TO SCALE



SECTION DETAIL OF HYDRANT CONNECTION WITH VALVE



FIRE HYDRANT INSTALLED W/ SWIVEL FITTINGS

CITY OF SHREVEPORT

TYPICAL FIRE HYDRANT DETAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

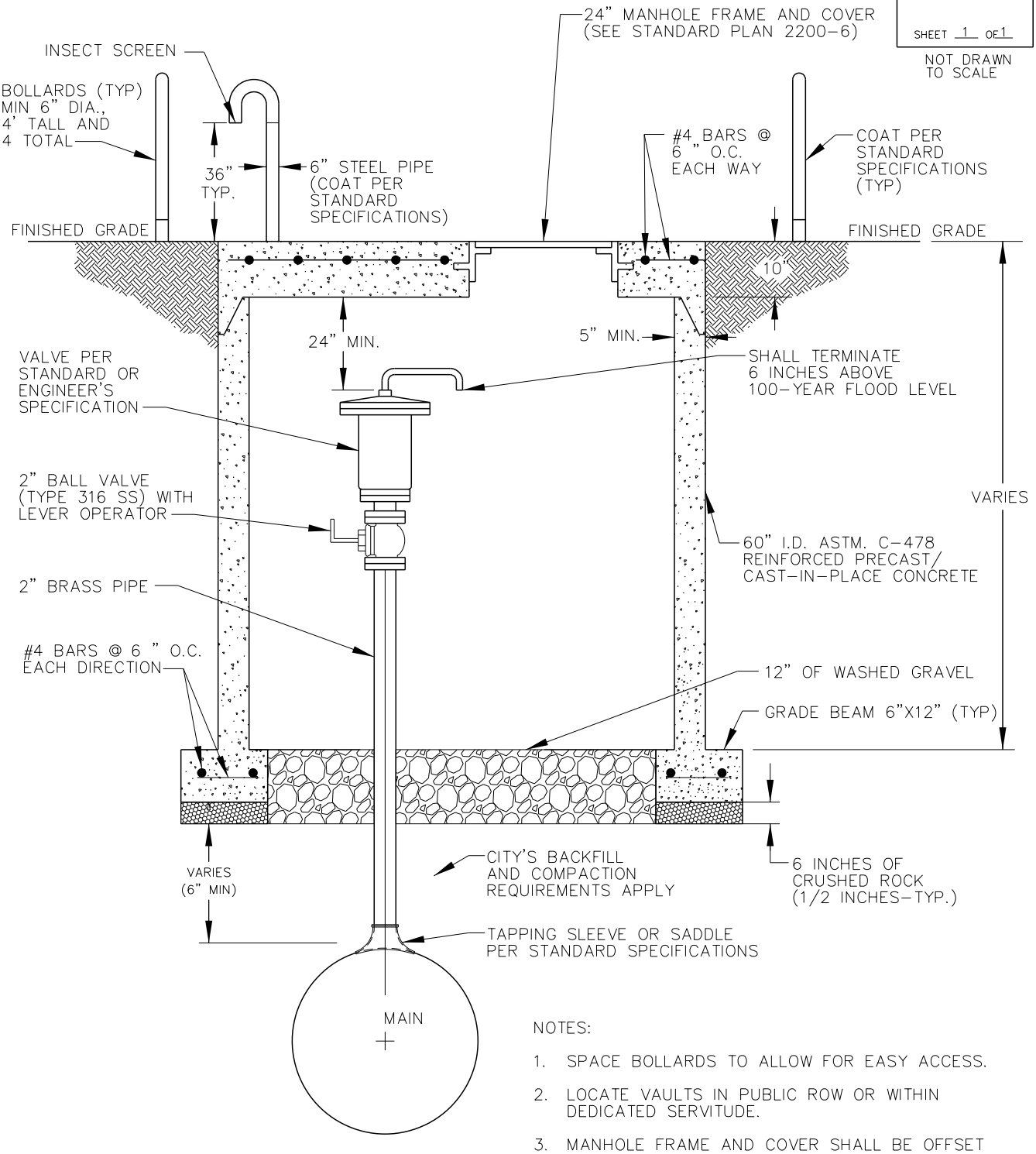
REVISED: RP

STANDARD PLAN

3400-1

SHEET 1 OF 1

NOT DRAWN TO SCALE



NOTES:

1. SPACE BOLLARDS TO ALLOW FOR EASY ACCESS.
2. LOCATE VAULTS IN PUBLIC ROW OR WITHIN DEDICATED SERVITUDE.
3. MANHOLE FRAME AND COVER SHALL BE OFFSET TO THE TOP LID AND AS FAR AWAY AS POSSIBLE FROM THE AIR VALVE ASSEMBLY, TO ALLOW FOR EASY AND SAFE ACCESS.

CITY OF SHREVEPORT

AIR RELEASE VALVE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: R. Moore

CHECKED: EES

APPROVED: KAP

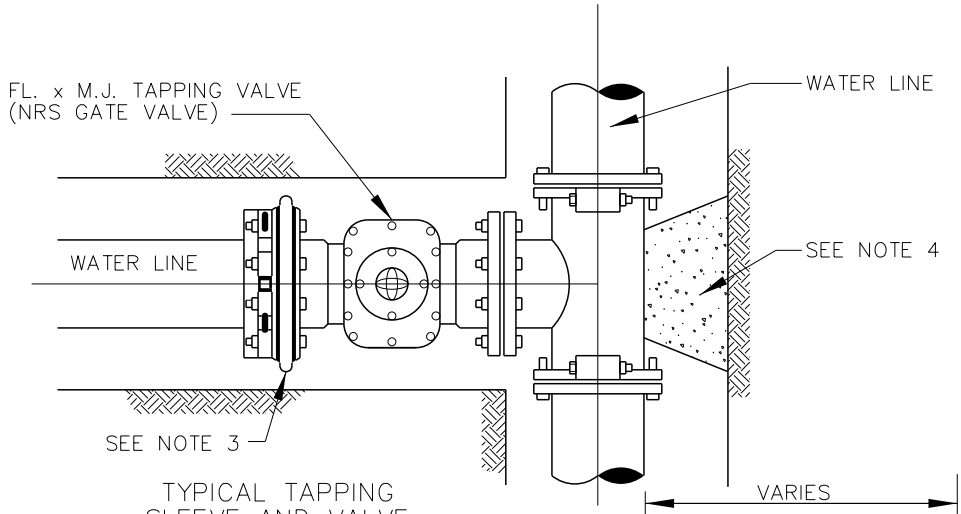
REVISED: RP

STANDARD PLAN

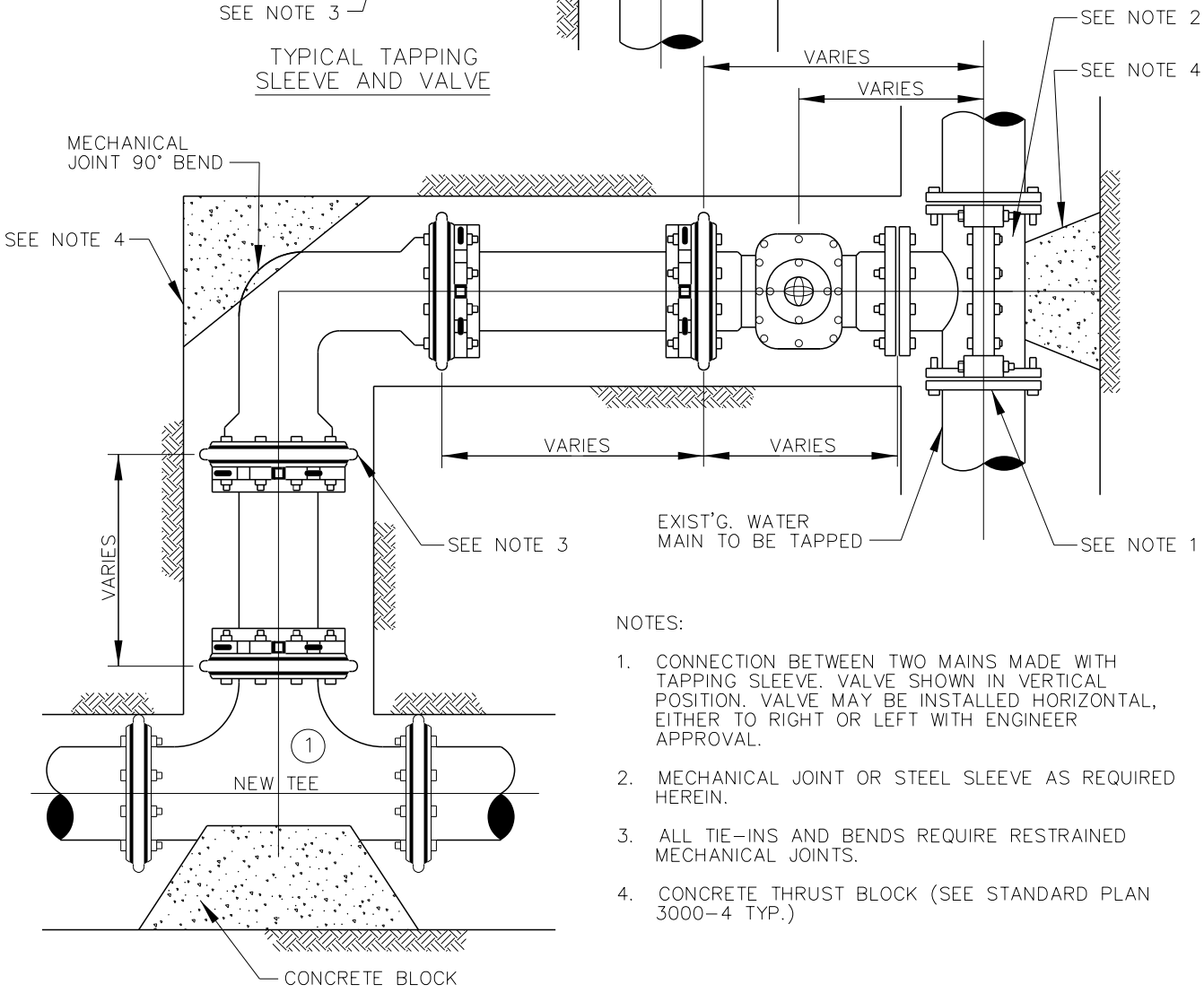
3500-1

SHEET 1 OF 1

NOT DRAWN TO SCALE



TYPICAL TAPPING SLEEVE AND VALVE



NOTES:

1. CONNECTION BETWEEN TWO MAINS MADE WITH TAPPING SLEEVE. VALVE SHOWN IN VERTICAL POSITION. VALVE MAY BE INSTALLED HORIZONTAL, EITHER TO RIGHT OR LEFT WITH ENGINEER APPROVAL.
2. MECHANICAL JOINT OR STEEL SLEEVE AS REQUIRED HEREIN.
3. ALL TIE-INS AND BENDS REQUIRE RESTRAINED MECHANICAL JOINTS.
4. CONCRETE THRUST BLOCK (SEE STANDARD PLAN 3000-4 TYP.)

TYPICAL ROLL - OVER CONNECTION USING TAPPING SLEEVE & VALVE

CITY OF SHREVEPORT

WET CONNECTIONS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: EES

APPROVED: KAP

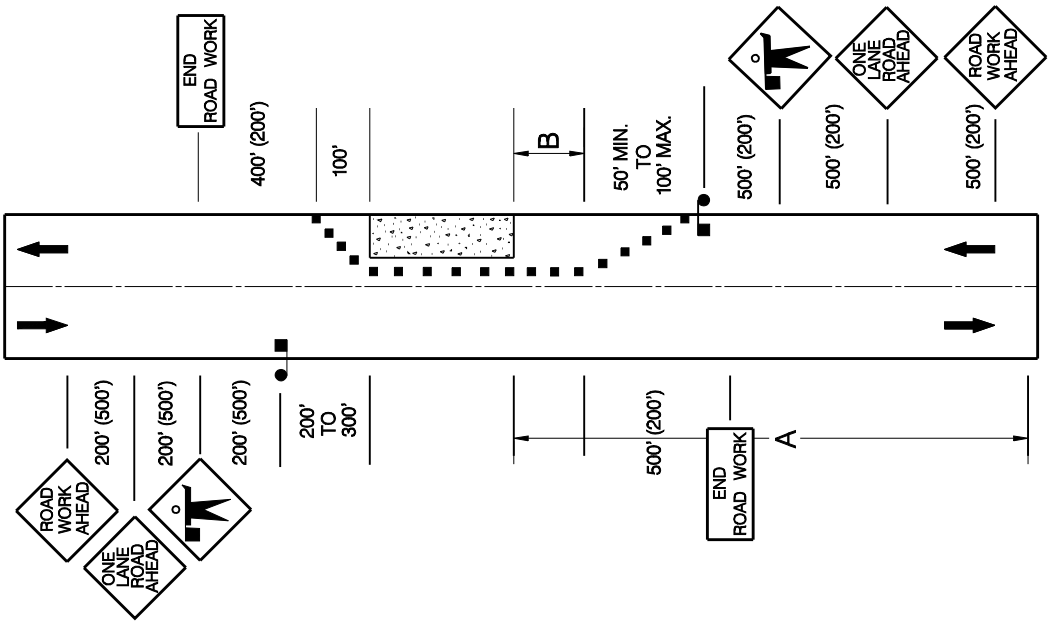
REVISED: RP

STANDARD PLAN

1306–1

SHEET 1 OF 1

TWO LANE TWO WAY TRAFFIC CONTROL



TWO LANE : ADVANCE DISTANCE AND BUFFER TABLE

SPEED LIMIT(S)	WORK ZONE AREA		LENGTH (FEET) ALL LANE WIDTHS URBAN	STANDARD
20	ADV. DIST.	A	790	1690
	BUFFER	B	90	90
25	ADV. DIST.	A	815	1715
	BUFFER	B	115	115
30	ADV. DIST.	A	850	1750
	BUFFER	B	150	150
35	ADV. DIST.	A	885	1785
	BUFFER	B	185	185
40	ADV. DIST.	A	930	1830
	BUFFER	B	230	230
45	ADV. DIST.	A	1940	1940
	BUFFER	B	340	340
50	ADV. DIST.	A	1970	1970
	BUFFER	B	370	370
55	ADV. DIST.	A	2000	2000
	BUFFER	B	400	400

NOTES :

1. FOR TWO LANE CITY STREETS A (200) FOOT SIGN SPACING MAY BE USED.
2. A TWO WAY TRAFFIC TAPER SHOULD BE 50 TO 100 FEET IN LENGTH AND MADE UP OF FIVE DEVICES 20 FEET APART.
3. FOR THE WORK AND BUFFER SPACE DEVICES MAY BE SPACED AT A DISTANCE OF TWICE THE SPEED LIMIT IN FEET.
4. THE DOWNSTREAM TAPER LENGTH SHOULD BE 100 FEET AND MADE UP OF FIVE DEVICES SPACED 20 FEET APART.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TYPICAL APPLICATION OF TRAFFIC CONTROL (BARRICADES PLAN)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

1306–2

SHEET 1 OF 31

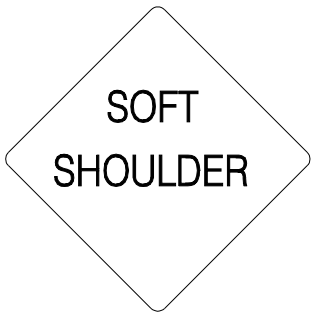
ADVANCE ROAD (STREET) CONSTRUCTION SIGN (W20 - 1)

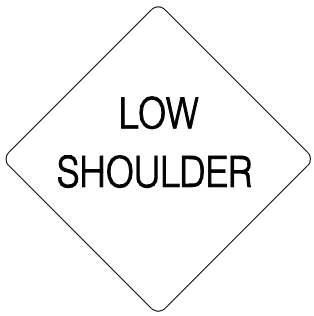
The Advance Road (Street) Construction sign is to be located in advance of the initial activity or detour a driver may encounter, and is intended for use as a general warning of obstructions or restrictions. It carries the legend ROAD (STREET) CONSTRUCTION (1500) FT or ROAD (STREET) CONSTRUCTION (1/2) MILE. It may be used in repetition with appropriate legends, or in conjunction with other construction signs. The legend ROAD (STREET) CONSTRUCTION AHEAD is intended for use on approaches of Road (Street) under construction.

W20 - 1
48" x 48"

SOFT SHOULDERS SIGN

The Soft Shoulders and or the Low Shoulders signs shall be used when in the option of the project engineer the shoulder of the highway under construction hazardous to traffic.





W - 8 - 4
30" x 30" 30" x 30"

Legend
5" Series C

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES	CITY OF SHREVEPORT HIGHWAY SIGN AND BARRICADES (DETAILS FOR CONSTRUCTION PROJECTS) USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS	DRAWN: Nhan Tran CHECKED: AZ. APPROVED: REW REVISED:

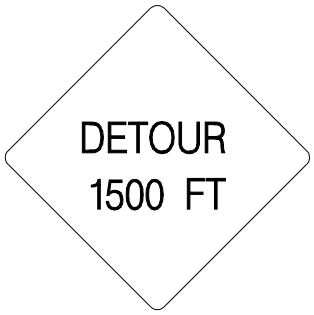
STANDARD PLAN

1306–3

SHEET 2 OF 31

ADVANCE DETOUR SIGN (W20 - 2)

The Advance Detour sign is intended for use in advance of a point which traffic is diverted over a temporary roadway or route. It carries the legend DETOUR (1500) FT or DETOUR (1/2) MILE. It may be used in repetition with appropriate legends or in conjunction with other construction signs.



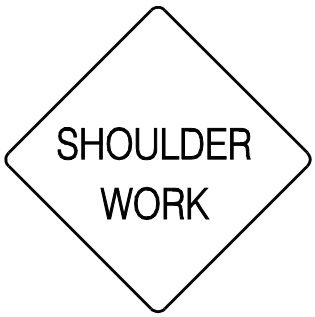
W20 - 2
48" x 48"

SHOULDER WORK AHEAD SIGN

The Shoulder Work Ahead sign is intended for use in advance of maintenance or minor reconstruction operations involing the shoulder, where the travelway remains unobstructed.

SURVEY CREW SIGN

The Survey Crew Sign is intended for use in advance of a point where a surveying party is working in or closely adjacent to the roadway.



W - 21 - 5
30" x 30"
Legend
5" Series C

W - 21 - 6
30" x 30"
Legend
5" Series D

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HIGHWAY SIGN AND BARRICADES
(DETAILS FOR CONSTRUCTION PROJECTS)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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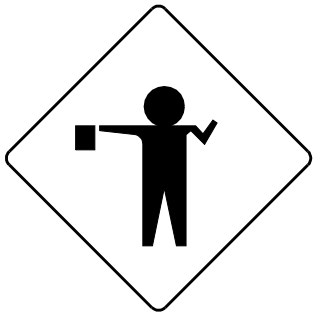
ADVANCE FLAGGER SIGN (W20 - 7)

The Advance Flagger sign is intended for use in advance of any point at which a flagger has been stationed to control traffic through a construction or maintenance project, It carries the flagger symbol. When needed, an appropriate distance message may be displayed on a supplemental plate below the symbol sign. It may be used inrepetition with appropriated revisions in the supplemental distances plate or in conjunction with the other construction signs.

The word message sign W20 - 7 with appropriate distances may be used as an alternate to the W20 - 7a flagger symbol sign.

The sign shall be promptly remove, covered, or turned to face away from the roadway when the flagger is not at the station.



W20 - 7a
36" x 36"
Supplemental Plate
24" x 18"

ADVANCE LANE CLOSED SIGN (W20 - 5)

The Advance Lane Closed sign is intended for use where applicable in advance of a point where one lane of a multiple - lane roadway is closed. It carries the legend RIGHT (LEFT) LANE CLOSED (1000) FT or RIGHT (LEFT) LANE CLOSED (1/4) MILE. It may be used in repetition with appropriate legend or in conjunction with other construction signs.

W20 - 5
48" x 48"

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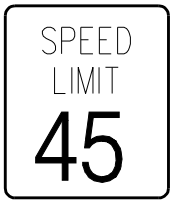
SPEED LIMIT SIGN

Speed limits have beeb approved for sections of highways under construction. These limits have been set at 45 mph. Throughout the section under construction with a reduction to 20 mph through and for 500' either side of each points within the limits of the project where construction activities require such reduction in the discretion of the project engineer. Regulatory 45 mph speed limit signs shall be placed at intervals throughout the section of the project where work is being done at the time. When the work area moves out of the immediate section the regulatory signs shall be covered or removed.

The Speed Zone Ahead sign shall be erected in advance of each authorized speed zone within a construction area.



R2 - 5C
24" x 30"

Background - White
Legend & Border - Black
Legend - Lines 1 & 2
4" Series E
Line 3 - 10" Series E

R - 2 - 1
24" x 30"

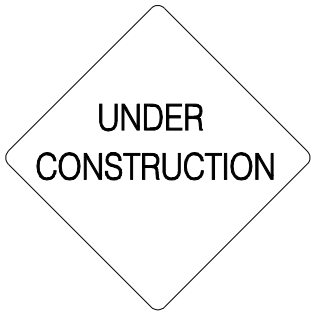
Background - White
Legend & Border - Black
Legend - Lines 1, 2 & 3
6" Series C

NOTE : Where construction occurs within city limits, communities, or other areas having posted legal speed limits less than those specified above, the posted legal speed shall apply.

All previously existing regulatory speed limit signs of greater than 45 mph shall be removed or covered for the duration of the project.

UNDER CONSTRUCTION SIGN

The Under Construction sign is intended for use at one- half to one mile intervals within relatively long construction projects particularly where no work is in progress to remind motorists that they are within a construction zone.



Legend
7" Series C

W - 22 - 5
48" x 48"

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SIDE ROAD CONSTRUCTION AHEAD SIGN

The Side Road Construction Ahead sign is intended for use in advance of an intersection where the road construction project on the side roadway approach terminates at the crossing. No construction activity shall be on the through roadway.

Legend
5" Series C
36" x 36"

ADVANCE ROAD (STREET) CLOSED SIGN (W20 - 3)

The Advance Road (Street) Closed sign is intended for use in advance of a point at which a roadway is closed to all traffic or to all but local traffic. It carries the legend ROAD (STREET) CLOSED (1000) FT or ROAD (STREET) CLOSED (1/4) MILE. It may be used in repetition with appropriate legends or in conjunction with other construction signs.

W20 - 3
48" x 48"

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ADVANCE ONE LANE ROAD SIGN (W20 - 4)

The Advance One Lane Road sign is intended for use only in advance of a point where traffic in both directions must use a single lane. It carries the Legend ONE LANE ROAD (1000) FT or ONE LANE ROAD (1/4) MILE. It may be used in repetition with appropriate legends or in conjunction with other construction signs.

If the one - lane stretch is of such length as not to be visible throughout from either end, or if the traffic is of such volume that simultaneius arrivals at both ends occur frequently, provision must be made to permit traffic to move alternately provision must be made to permit traffic to move alternately under control.

W20 - 4
48" x 48"

ADVANCE LANE CLOSED SIGN (W20 - 5)

The Advance Lane Closed sign is intended for use where applicable in advance of a point where one lane of a multiple - lane roadway is closed. It carries the Legend RIGHT (LEFT) LANE CLOSED (1000) FT or RIGHT (LEFT) LANE CLOSED (1/4) MILE. It may be used in repetition with appropriate legends or in conjunction with other construction signs.

W20 - 5
48" x 48"

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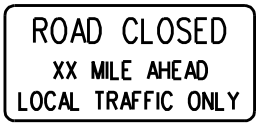
SHEET 7 OF 31

LOCAL TRAFFIC ONLY SIGN

The Local Traffic Only sign shall be used where through traffic must detour to advoid a closing of the road or street some distance beyond, but where the road or street is open to traffic up to the point of closure. It shall carry the legend ROAD CLOSED (XX) MILES AHEAD - LOCAL TRAFFIC ONLY or, optionally for urban use, STREET or ROAD CLOSED TO THRU TRAFFIC. It should be erected preferably on a barricade in the center of the roadway, if the pavement width permits; otherwise it shall be erected at the right of the roadway. Normally it will be accompanied by a detour arrow sign indicating the proper route for through traffic. The word "Road Closed" by be subtituded by BRIDGE OUT where applicable. Where the sign faces through traffic it shall be preceded by an Advance Road Closed sign and. if applicable, an Advance Detour sign.



R - 11 - 3
60" x 30"

Background - White
Legend & Border - Black
Legend - Line 1 - 6" Series C
Line 2 - 5" Series C
Line 3 - 4" Series C

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ROAD MACHINERY AHEAD SIGN

The Road Machinery Ahead sign shall be used in areas where heavy road equipment such as a grader is operating in or closely adjacent to the roadway.

FRESH OIL SIGN

The Fresh Oil or Fresh Tar sign shall be used to warn motorists that resurfacing operations have rendered the surface of the pavement temporalrily hazardous and that objectionable splashing on vehicles may occur.

W - 21 - 3
36" x 36"
Legend
5" Series D

W - 21 - 2
30" x 30"
Legend
6" Series D

ROAD WORK AHEAD SIGN

The Road Work Ahead sign is intended for use in advance of maintenance or minor reconstruction operation in the roadway.

W - 21 - 4
36" x 36"
5" Series D

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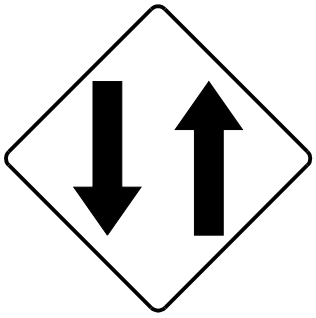
TWO-WAY TRAFFIC SIGN

The Two - Way Traffic sign is intended for use where a roadway designed or normally used for one - way traffic is temporarily being used for traffic in both directions or where under any other cir--cumstances it may be necessary to remind drivers that they are tra--veling on a two-way roadway. The sign should be placed at intervals or about one-half mile but not exceeding one mile. Special care must be taken to place it at or just beyond any important access points.



W - 6 - 3
48" x 48"

DETOUR ARROW SIGN

The Detour Arrow sign is used at a point where detour roadway or route has been established due to the closure of a part of a highway to through traffic. It should normally be mounted just below the Road Closed sign or the Local Traffic Only sign.

M - 4 - 9R
M - 4 - 9L
30" x 24"

Background - Orange
Legend & Arrow - Black

M - 4 - 10R
M - 4 - 10L
48" x 18"

Background - Orange
Legend - Black
Arrow - Orange
Legend - 6" Series D

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ROAD CLOSED SIGN

The Road Closed sign shall be used where the road is closed to all traffic except contractors equipment and officially authorized vehicles. It should be erected at or near the center of the roadway on or above a type III barricade because it is the last sign the driver will see before he must stop or turn. It is essential that it be large and legigle. It shall have a standard and minimum size of 48 inches by 30 inches.

The Road Closed sign shall not be used where traffic is maintained or where the actual closure is some distance beyond the sign and local traffic is permitted access to nearer points. In the latter case the Local Traffic Only sign must be used.

R - 11 - 2
48" x 30"

Background - White
Legend & Border - Black
Legend - 8" Series D

ADVISORY SPEED PLATES (W- 13 - 1)

In conjunction with any warning sign an advisory speed plate may be used to indicate a maximum recommended speed through a hazardous area. Except in emergencies an advisory speed plate shall not be erected until the recommended speed has been determined by the traffic enginer. Advisory speeds greater than the posted speed limil shall not be used.

W - 13 - 1
18" x 18"

Line 1 - Series 8E
Line 2 - Series 3E

Background - Orange
Legend & Arrow - Black

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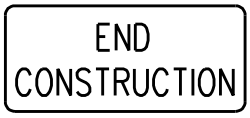
END CONSTRUCTION SIGN

The End Construction sign shall be erected approximately 500 feet beyond the end of a major construction or maintenance job to indicate the limit of any restriction or special precautions that have been imposed. Ofen it will suffice to place this sign on the back of the warning sign set up facing the opposite direction of traffic or on the back of wing barricade. Where appropriate the legend END ROADWORK may be used.

LENGTH OF CONSTRUCTION SIGN

The Length Construction sign shall be erected at the limits of any major road construction or maintenance job of more than 2 miles in extent. Where traffic is maintained through the job it carries the legend ROAD CONSTRUCTION NEXT (5) MILES. It can be effectively mounted on a wing barricade. The project length shall be approximated only to the nearesr one tenth of a mile.



G - 20 - 2
60" x 24"

G - 20 - 1
60" x 36"

Background - Orange
Legend & Border - Black
Legend - 6" Series C

NOTE :

ALL SIGNS ON THIS SHEET ARE TO HAVE ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER, EXCEPT WHERE OTHERWISE SPECIFIED.

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HIGHWAY SIGN AND BARRICADES
(DETAILS FOR CONSTRUCTION PROJECTS)

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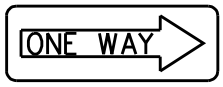
ONE - WAY SIGN

The One - Way sign shall be used to indicate streets or roadways upon which vehicular traffic is allowed to travel in one direction only. The sign shall be eiher :

1. a white arrow on a black horizontal rectangle of a standard and minimum size of 36 inches by 12 inches with the words "one - way" centered in the arrow, or

2. a vertical rectangle of a standard and minimum size of 18 inches by 24 inches with black lettering and arrow on a white background. The vertical design has advantages where lateral space is limited. Both designs may be made in rights and lefts.



R - 6 - 2L
R - 6 - 2R
18" x 24"

Background - Black
Legend - Black
Arrow - White
Legend - 4" Series D

R - 6 - 2L
R - 6 - 2R
18" x 24"

Background - White
Legend & Border - Black
Legend - 5" Series D

DO NOT PASS

The Do Not Pass sign is intended for use where a roadway normally use for one way traffic is temporarily being used for traffic in both directions to remind drivers not to pass It shall be installed on both sides of the roadway within such a section at intervals of 1000 - 1500 feet for the entire length of the section.

WEIGHT LIMIT SIGN

The Weight Limit sign shows the maximum gross weight of the vehicle that can safely be permitted on a road surface of bridge. Weight restrictions should not be imposed without the approval of the authority having jurisdiction over the highway and a reasonable effort should be made to provide temporary facilities capable of carrying the traffic normallyusing the highway.

R - 4 - 1
24" x 30"

Background - White
Legend & Border - Black
Legend - 6" Series D

R - 12 - 1
24" x 30"

Background - White
Legend & Border - Black

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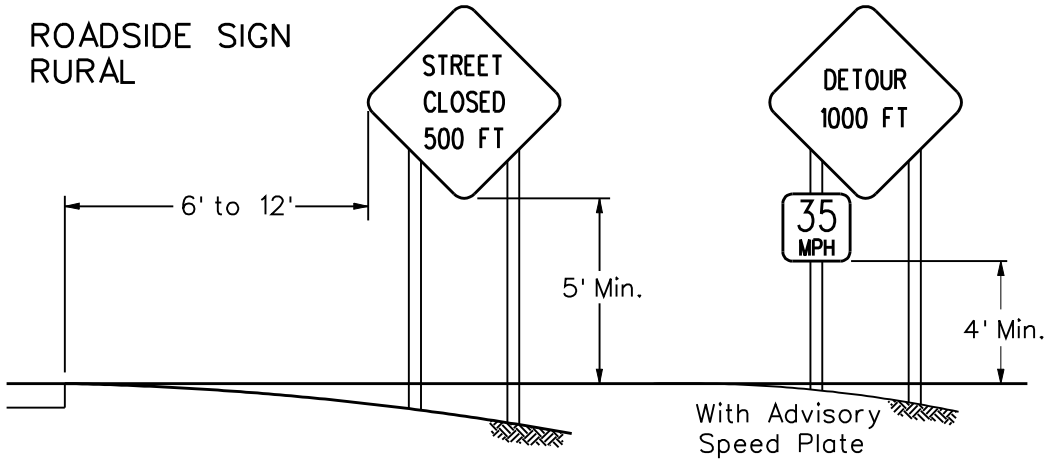

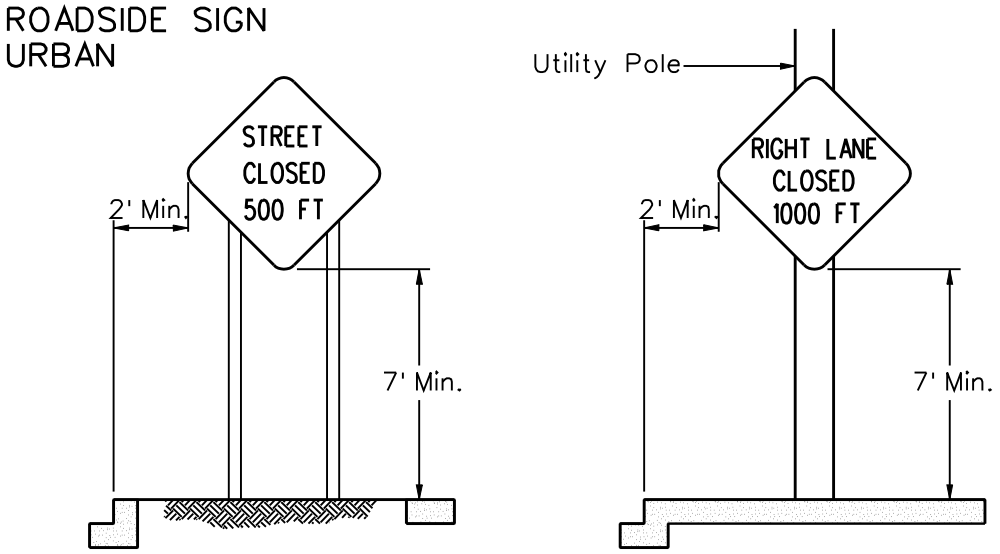

Figure 2 - 1

Heights and lateral location of signs - typical installations.

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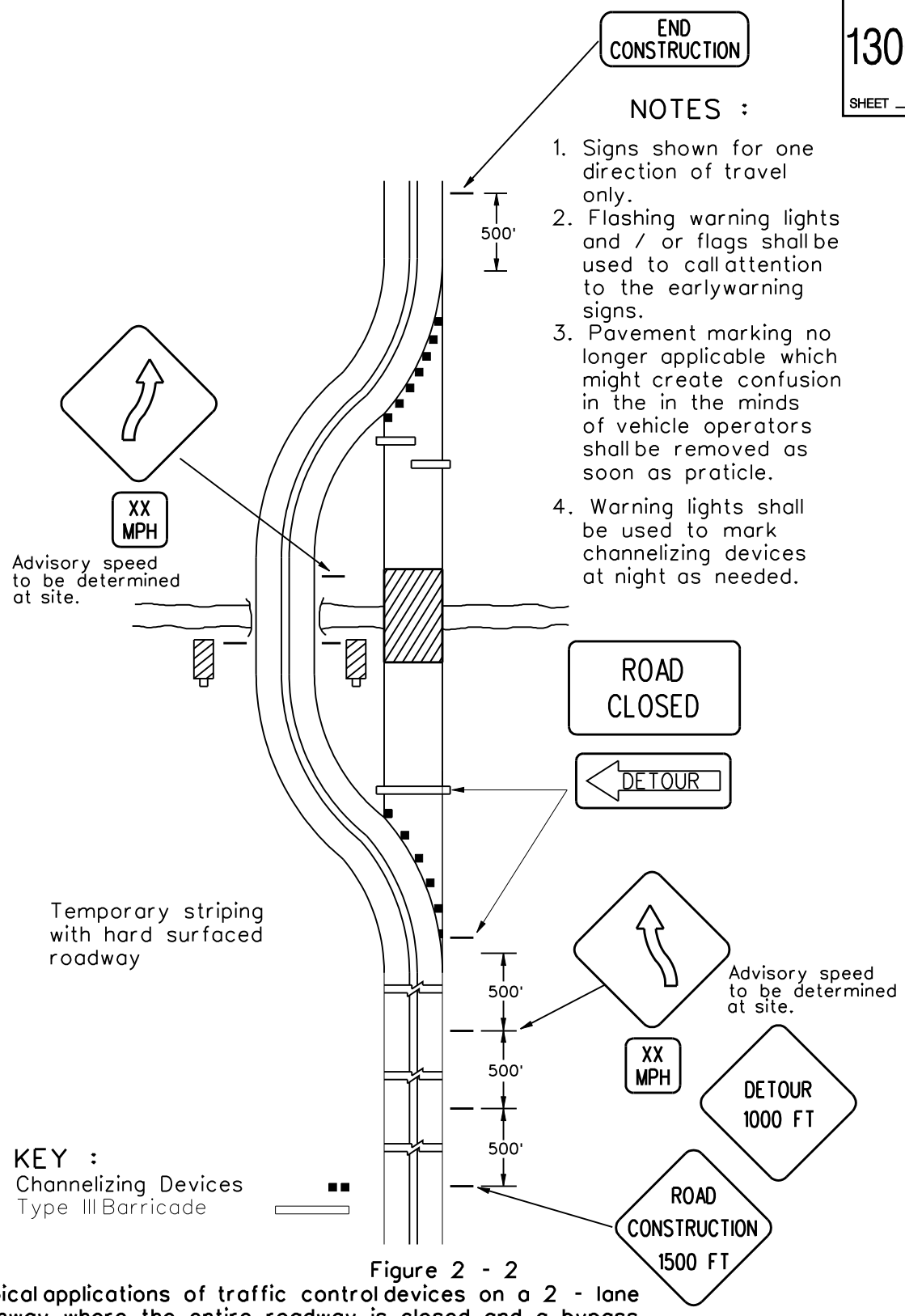

Figure 2 - 2

Typical applications of traffic control devices on a 2 - lane highway where the entire roadway is closed and a bypass detour is provided.

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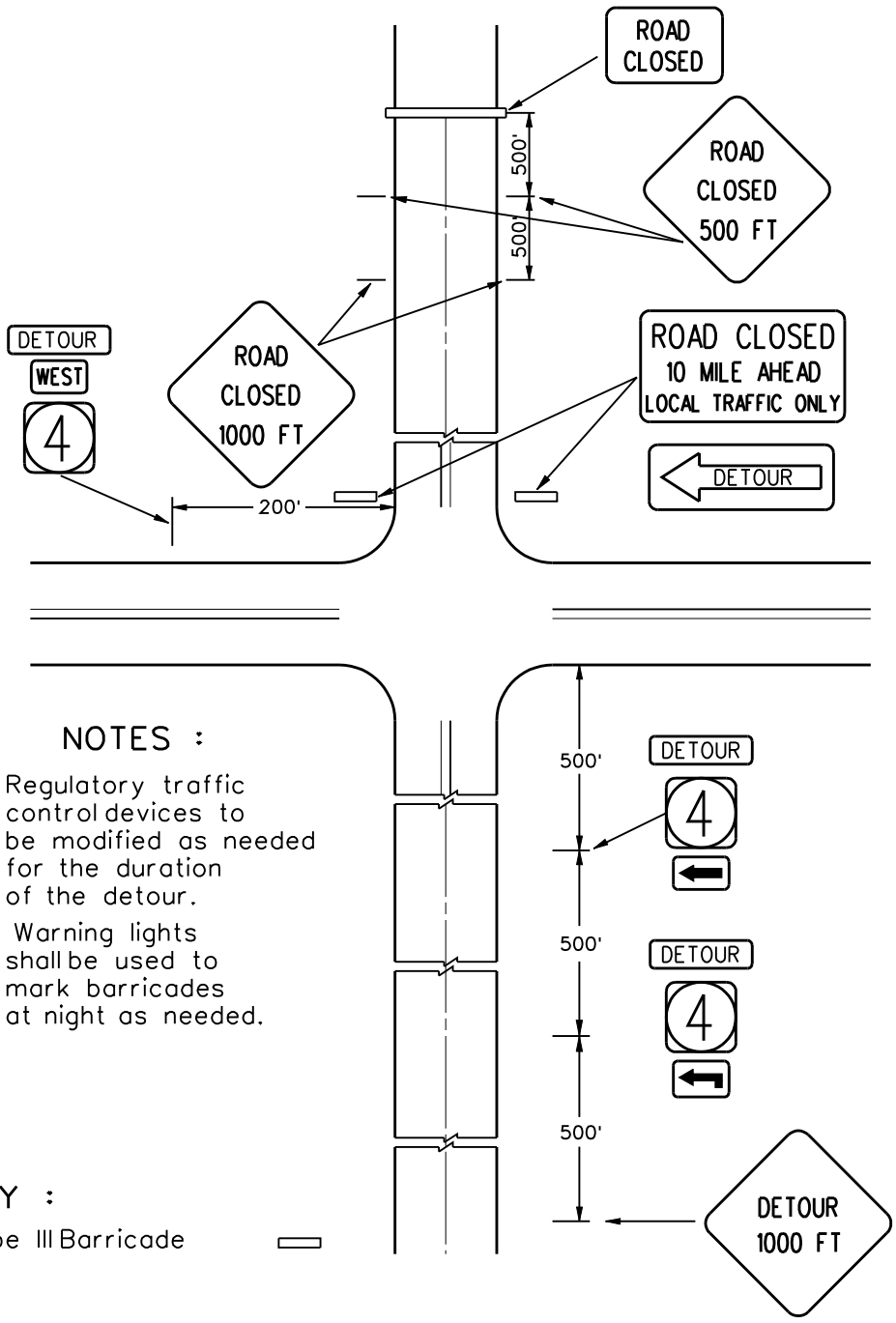

NOTES :

1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Warning lights shall be used to mark barricades at night as needed.

KEY :

Type III Barricade

Figure 2 - 3

Typical application - roadway closed beyond detour point.

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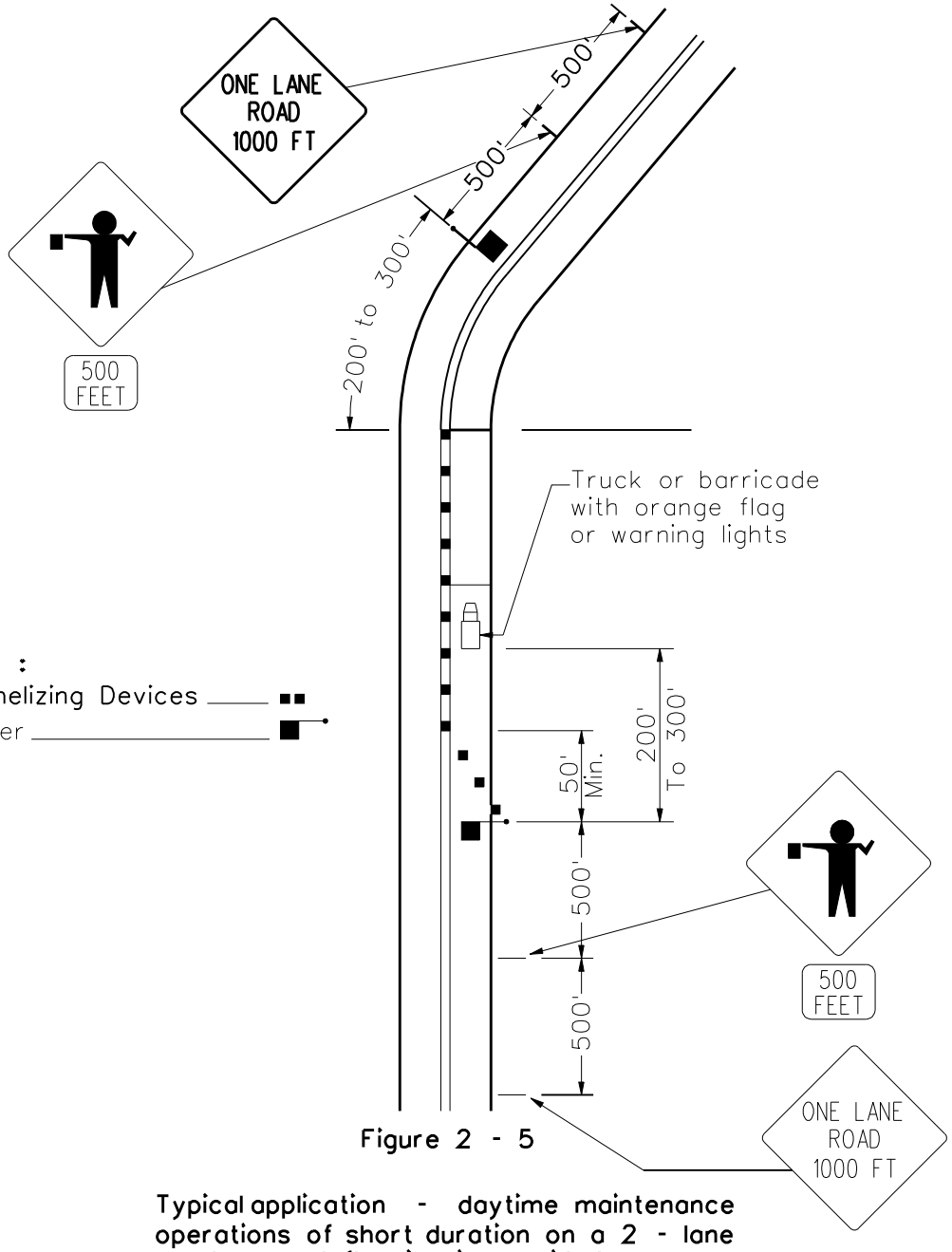

Figure 2 - 5

Typical application - daytime maintenance operations of short duration on a 2 - lane roadway and flagging is provided.

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TYPICAL APPLICATION OF TRAFFIC CONTROL
(BARRICADES PLAN)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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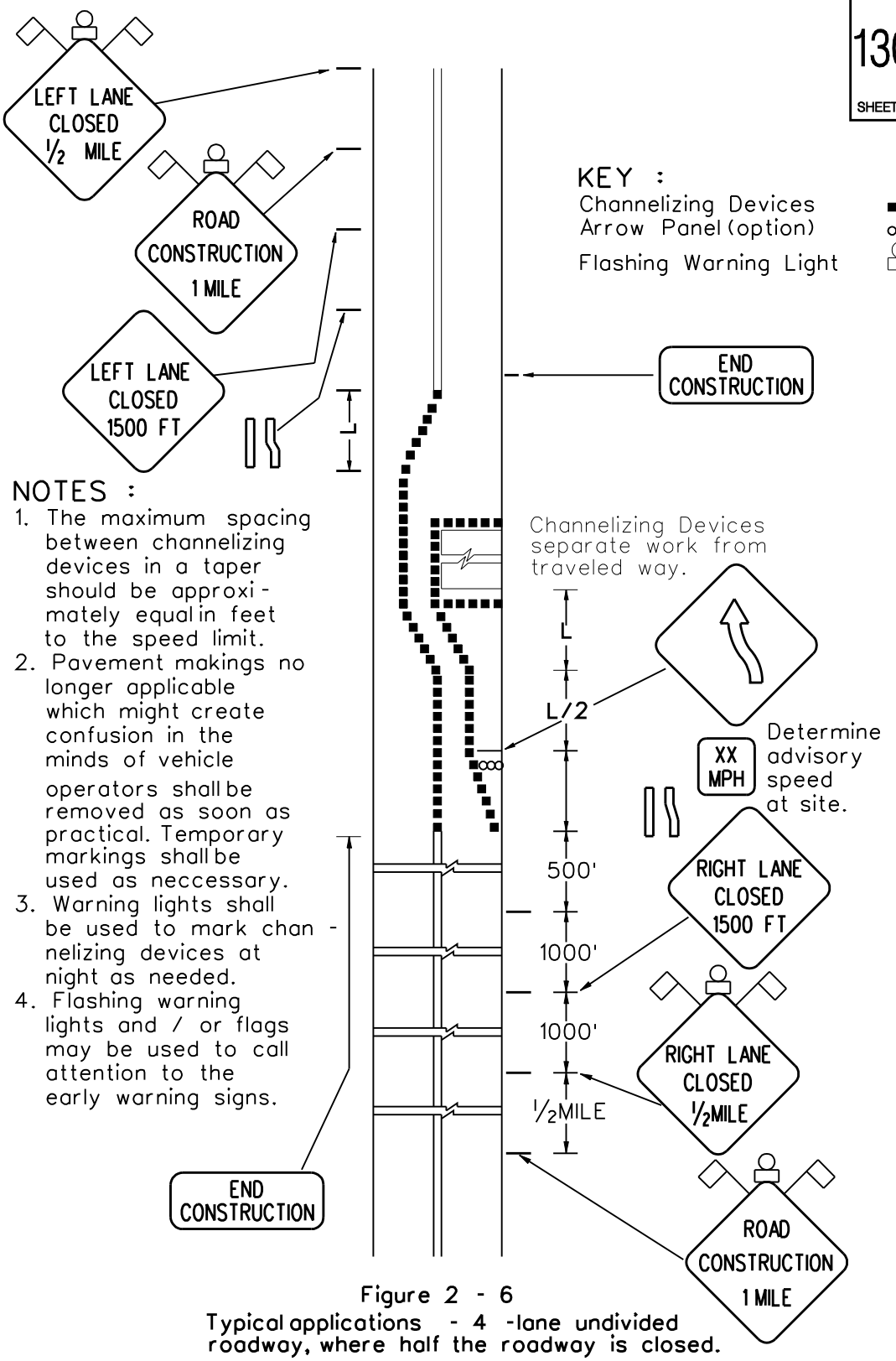

NOTES :

1. The maximum spacing between channelizing devices in a taper should be approxi - mately equal in feet to the speed limit.
2. Pavement makings no longer applicable which might create confusion in the minds of vehicle operators shall be removed as soon as practical. Temporary markings shall be used as neccessary.
3. Warning lights shall be used to mark chan - nelizing devices at night as needed.
4. Flashing warning lights and / or flags may be used to call attention to the early warning signs.

Figure 2 - 6
Typical applications - 4 -lane undivided roadway, where half the roadway is closed.

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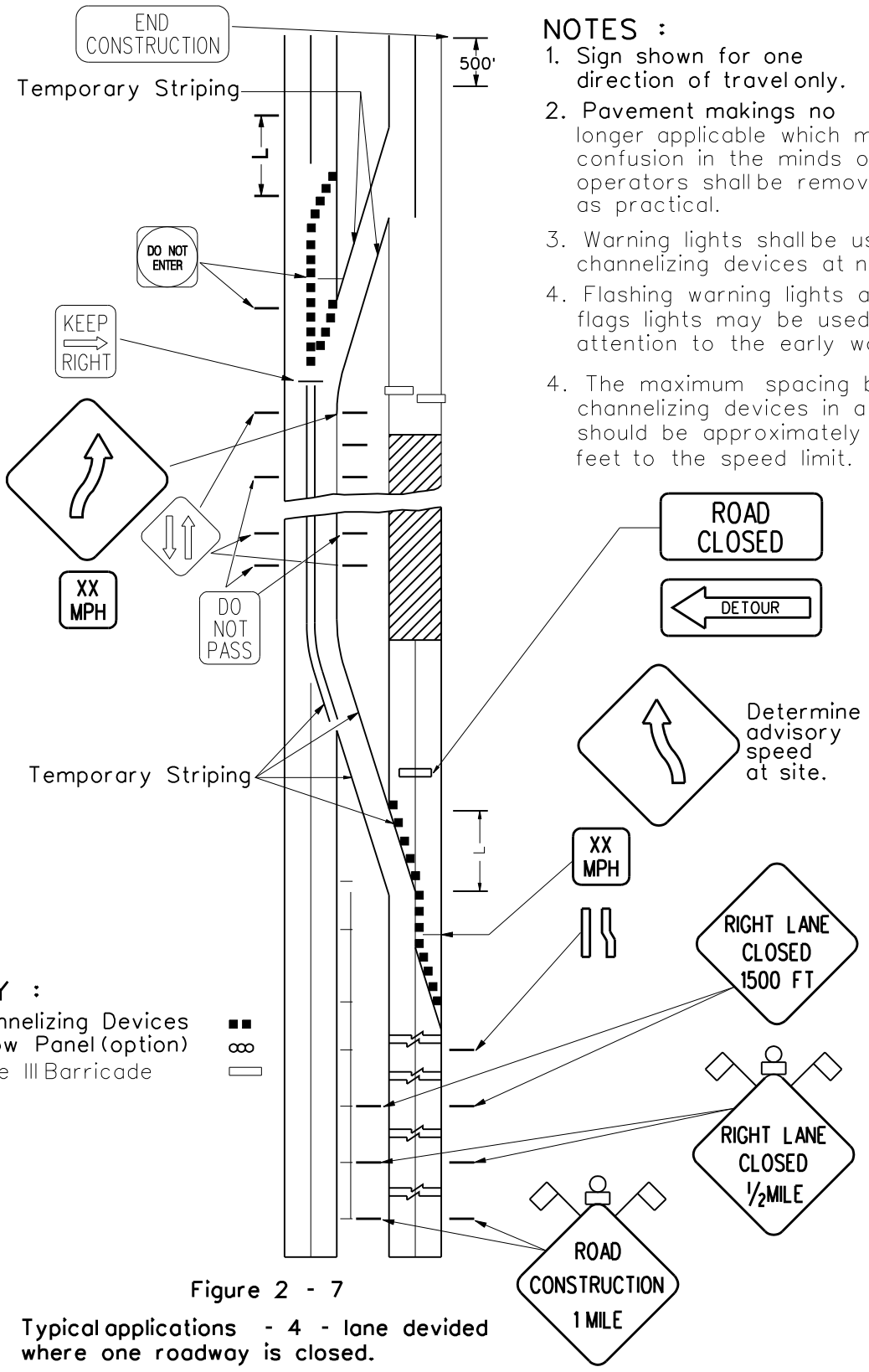

NOTES :

1. Sign shown for one direction of travel only.
2. Pavement makings no longer applicable which might create confusion in the minds of vehicle operators shall be removed as soon as practical.
3. Warning lights shall be used to mark channelizing devices at night as needed.
4. Flashing warning lights and / or flags lights may be used to call attention to the early warning signs.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit.

KEY :

Channelizing Devices ■■

Arrow Panel (option) ∞

Type III Barricade ▭

Figure 2 - 7

Typical applications - 4 - lane devided where one roadway is closed.

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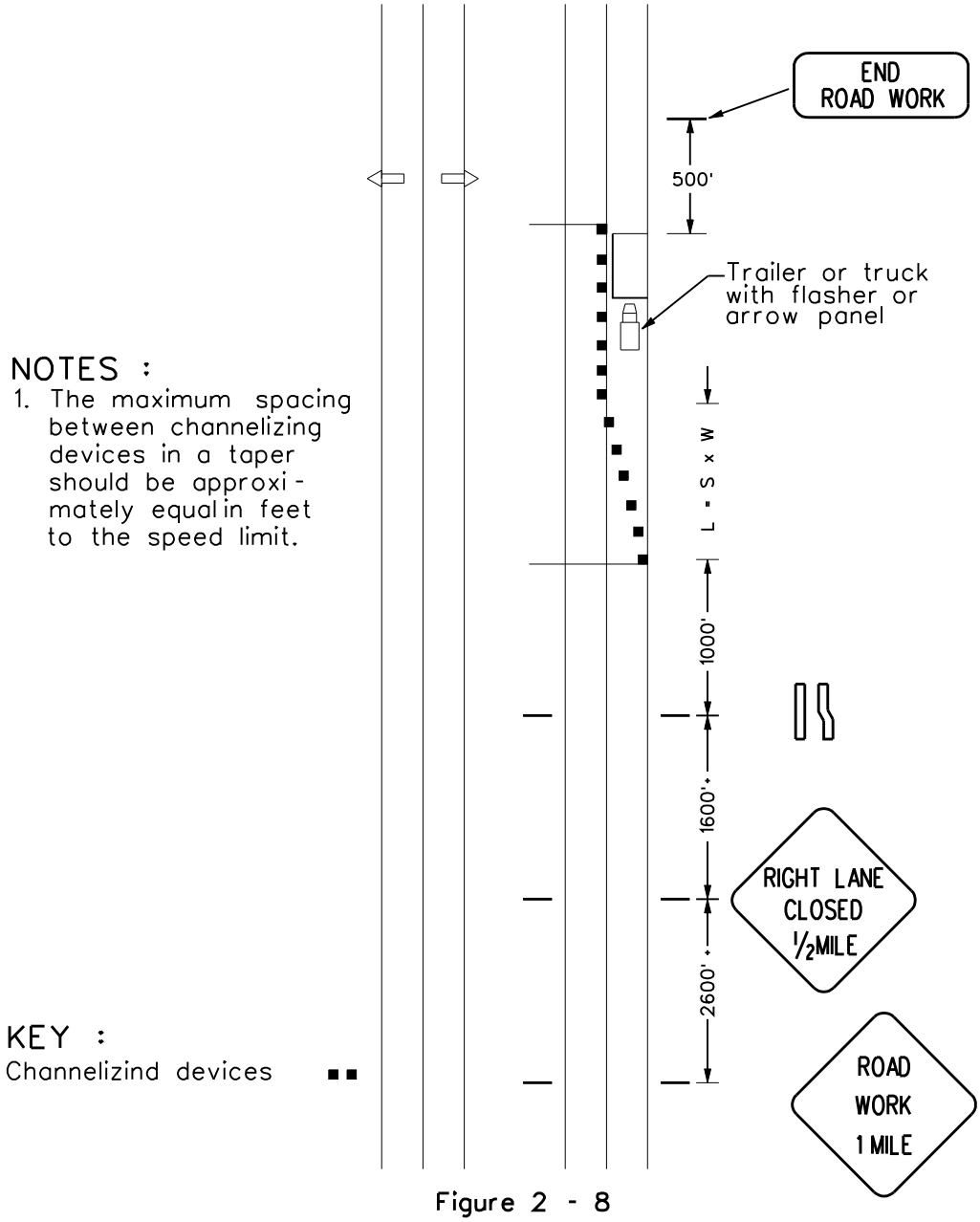
SHEET 19 OF 31



NOTES :

1. The maximum spacing between channelizing devices in a taper should be approxi - mately equal in feet to the speed limit.

KEY :

Channelizind devices ■■

Figure 2 - 8

Typical application - daytime maintenance operations of short duration on a 4 - lane divided roadway where half of roadway is closed.

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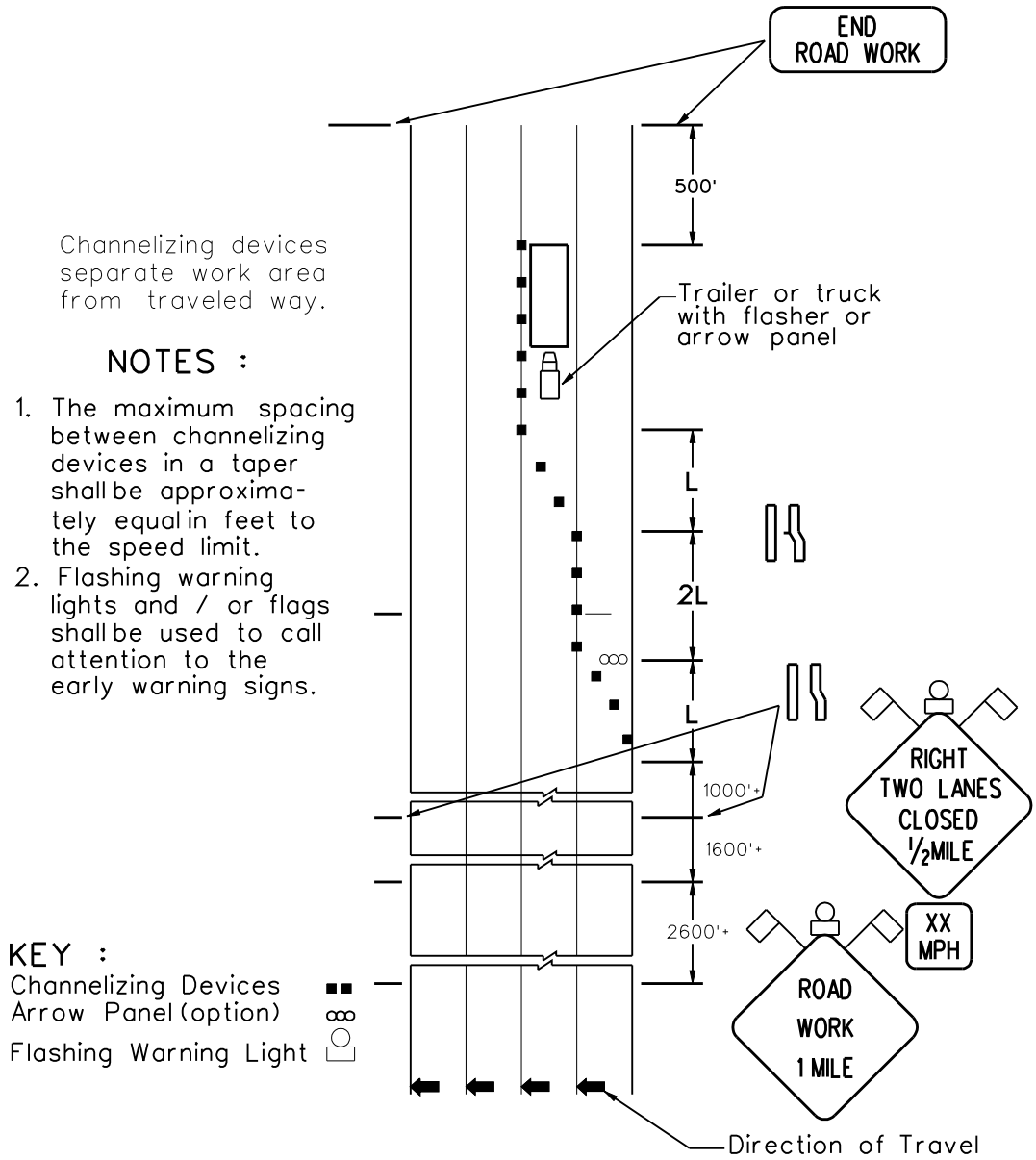

Figure 2 - 9

Typical application - closing multiple lanes of a multilane highway.

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PORTABLE AND TEMPORARY MOUNTING

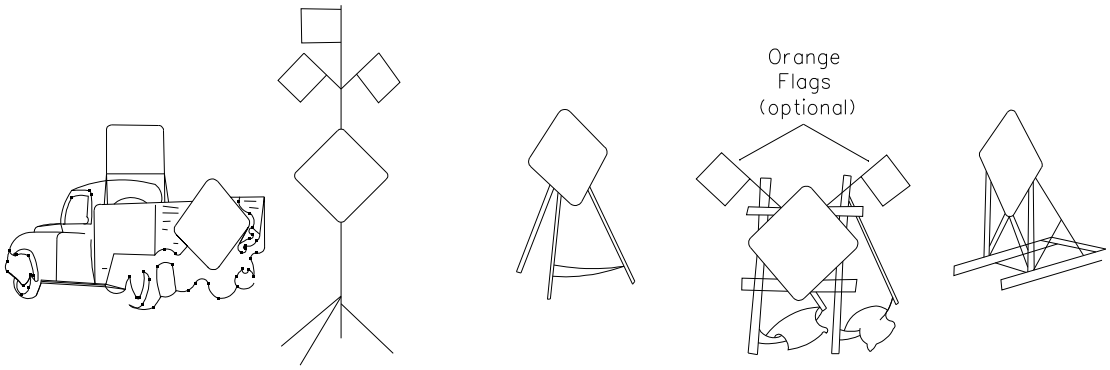

Figure 2 - 10

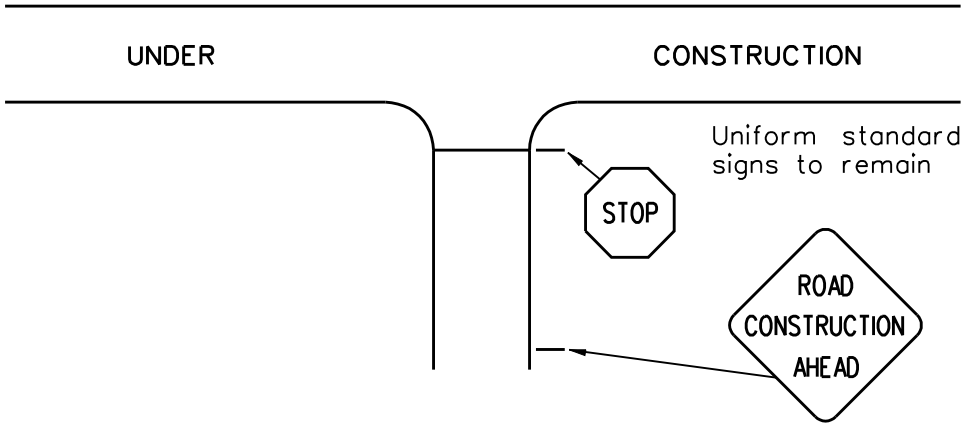

Figure 2 - 11

Typical signing on a side road approach to a construction project.

STANDARD PLAN

1306-23

SHEET 22 OF 31

NOTES :

SIGNS

The backing material use in the fabrication of construction signs shall be in accordance with sub- section 713.02 of the standard specifications as revised by the project specifications Minimum thickness of wood backing to be $\frac{5}{8}$". Reflectorization of signs, barricades and drums shall be by mean of Type II encapsulated lens reflective sheeting. All material and their application shall meet Department specifications.

REMOVAL OF SIGNS

Signs warning against a particular harzard or operation shall not be left in place when the operation is not in progress or when the harzard have been removed. On partime operations, such as "Truck Crossing", "Men Working" etc., shall be removed or set aside out of view of traffic when the operation is not in progress. When construction operations change, signing must change accordingly : all conflicting signs from previous operation must be removed or covered as new signs are erected.

COVERING OF SIGNS

Signs shall be covered with a strong, lightweight, copletely opaque material, shaped or formed so as to cover all the legend face of the sign and securely fastened so as to prevent its accidental removal by wind or other causes. The covering material shall be non-reflective and of a neutral shade of grey or black. Burlap cloth, cardboard or paper are not acceptable materials.

Signs that might obscure other construction signs shall be removed, not covered.

LIGHTING

Lighting shall supplement all barricades that close one or more lanes or that extend accross the roadway. A minimum of four (4) lights will be required where a barricade closes a road. Lighting shall be by approved electrical installations. Where battery operated equipment is used, it shall conform to specifications for high or low intensity, flashing or steady burning lights as set forth in the standard specifications for barricade warning lights, subsection 1018.12.

1. On all interstate primary or other highways carry an ADT of more than 750 vehicles per lane, when a lane is closed, high intensity flashing lights shall be used to delineate the first addvanced warning sign.

2. On all other highways low intensity flashing lights shall be permitted to delineate the first advance sign.

3. To delineate all other harzards off the travelway, low intensity flashers shall be used.

4. Steady burning lights shall be used to mark barricades placed on the roadway for channelization of traffic. Approved sequential lighting shall be permitted.

PAVEMENT MARKINGS

All pavement markings at either end of or within the limits of the project that are in conflict with the project signing or the required traffic movements shall be removed by abrasion from the pavement. If, in the opinion of the project engineer, special pavement markings are needed as a traffic control, as in channelization or width transitions, they shall be reflectorized, removable, temporary lane marking tape and should be accompanied by proper signs. Typical illustrations are shown in the " Louisiana Manual of Uniform Traffic Control Device".

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES DOS

CITY OF SHREVEPORT

HIGHWAY SIGN AND BARRICADES (DETAILS FOR CONSTRUCTION PROJECTS)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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REVISED:

STANDARD PLAN

1306-24

SHEET 23 OF 31

GENERAL NOTES :

1. All signs and pavement marking here- in shall be in accordance with the current edition of the "Louisiana Manual on Uniform Traffic Control Devices".

2. Responsibility is hereby place upon the contractor for the erection and maintenance of all signs and barricades outlined in these plans as necessary to the protection of the moni -toring public that fall within the limits of the project and immediately before and pertaining to the end barricade or advance detour barricades. The contractor shall also be resp[onsible for the maintenance of all permanent signs that are left in place as essential to use the safe movement and guidance of traffic within the limits of project. The Department shall erected any detour route marking required to guide traverlers around the construction area, but the con- tractor shall be responsible for the signs of this category that are required at the barricades.

3. Where a construction project involes a number of road segments remote from each other, only those segments where actual work is in progress need be signed upon completion of any segment. Construction signing shall be removed after permanent signing in this place.

4. All construction sign are temporary signs and are to be mounted on steel post, portable easels, or 4" x4" wood posts adjacent to or within the roadway.

5. When two projects are adjoining and construction is in progress on both, eliminate all signs at juncture. When one project is complete, regular advance signing must be erected on the remaining project.

6. Signs shown in all illustrations are typical and may vary with each specific condition. Other signs from sheet 1 more appropriate for the specific condition may be subtituted in any of the above illustrations upon approval by the project engineer. However, the required number of such signs general shall be constant and shall not exceed the number shown on the illustrations.

7. Taper Formular :

L = S x W for speeds of 45 or more.

$L = \frac{WS^2}{60}$ for speeds of 40 or less.

L = Minimum length of taper

L = Width of offset.

L = Numerical value of posted speed limit prior to work or 85 percentile speed.

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HIGHWAY SIGN AND BARRICADES
(DETAILS FOR CONSTRUCTION PROJECTS)

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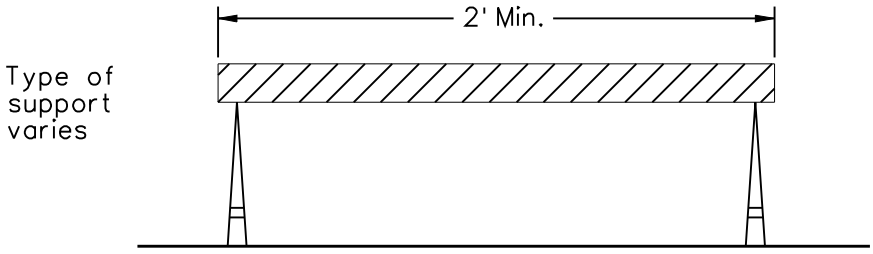
1306-25

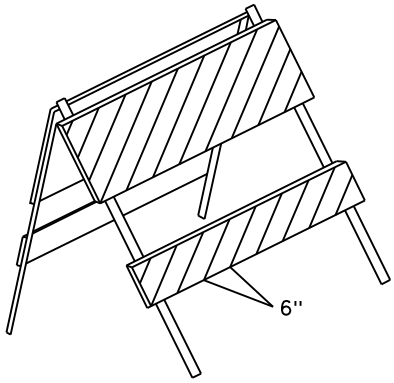
SHEET 24 OF 31

TYPE I BARRICADE



TYPE II BARRICADE

For dimensions not shown, see Table 3 - 1.



TYPE III BARRICADE

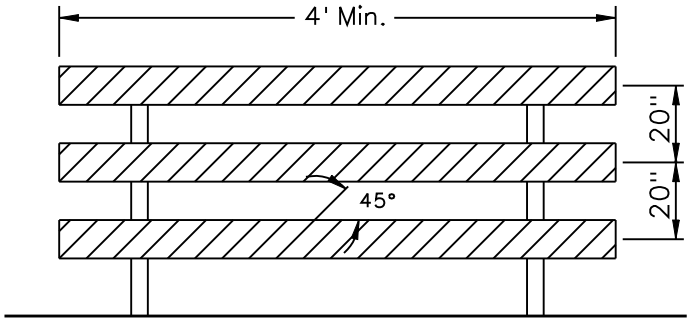


Figure 3 - 1 Standard of Barricades

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HIGHWAY SIGN AND BARRICADES
(DETAILS FOR CONSTRUCTION PROJECTS)

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SHEET 25 OF 31

	TYPE I	TYPE II	TYPE III
Width of Rail	8" Min. - 12" Max.	8" Min. - 12" Max.	8" Min. - 12" Max.
Length of Rail	2' Minimum	2' Minimum	4' Minimum
Width of Stripes **	6 Inches	6 Inches	6 Inches
Height	3' Minimum	3' Minimum	5' Minimum
Number of Reflectorized Rail Face	2 (One each direction)	4 (Two each direction)	3 - In facing traffic in one direction
			6 - If facing traffic in two direction

Table 3 - 1 Barricade Characters

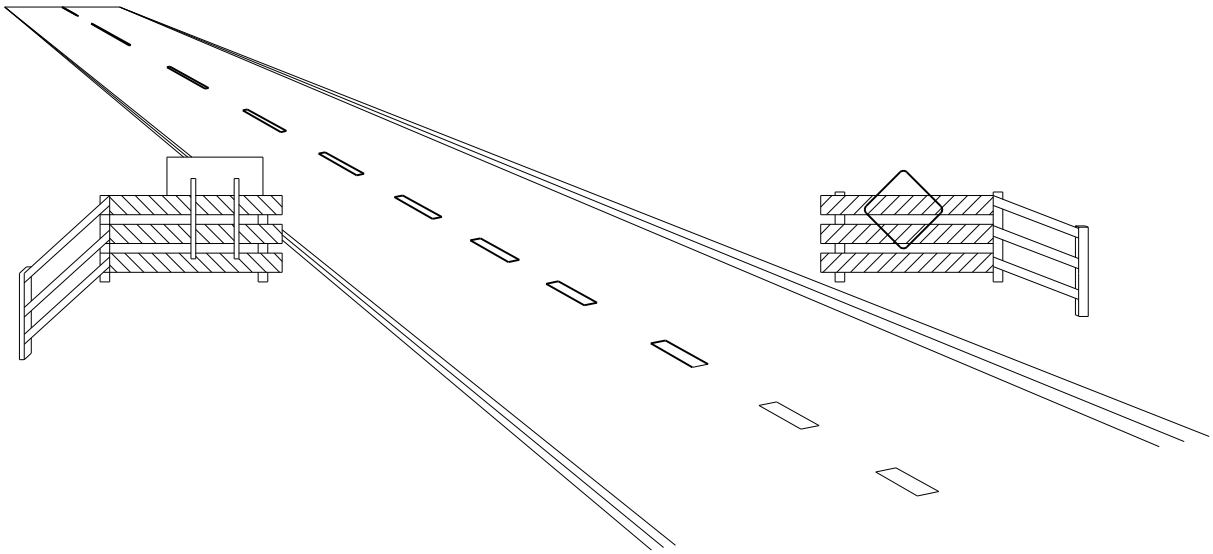

Figure 3 - 3

CITY OF SHREVEPORT

HIGHWAY SIGN AND BARRICADES
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USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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Typical construction warning signs shown with messages other than detailed on standard drawings shall be constructed using the largest possible letter sizes. Sign size and color shall be the same as other construction warning signs used for similar conditions.

* When 2 - way traffic - vertical panels shall be installed back to back.

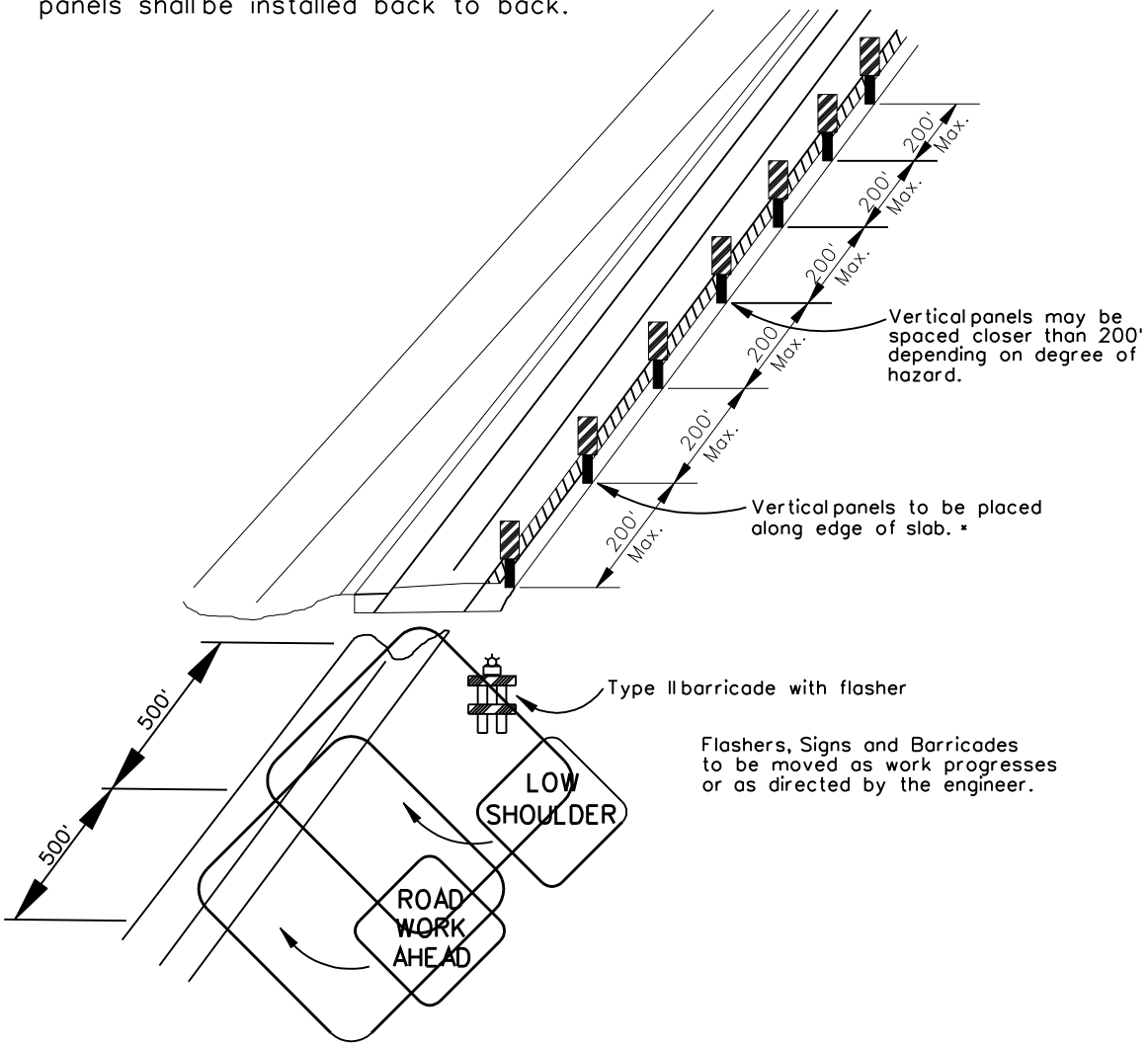

Figure 3 - 5

Typical application of traffic control devices for trench widening or full width shoulder widening adjacent to travelway at 200' intervals on tangent and 100' maximum intervals on curves. The interval to be reduced as degree of curveture increases so that the edge of trench is at all times clearly delineated. Drive in trench along edge of existing slab.

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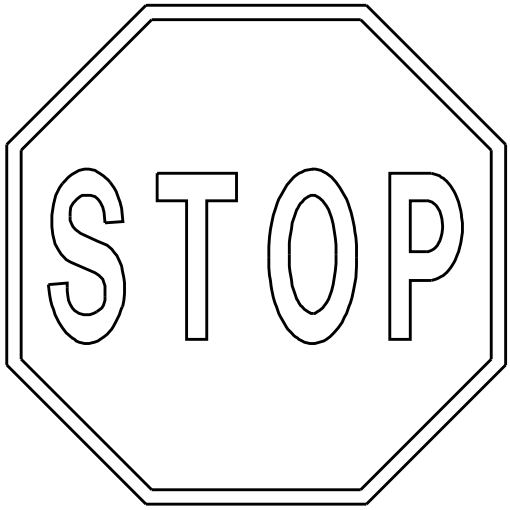
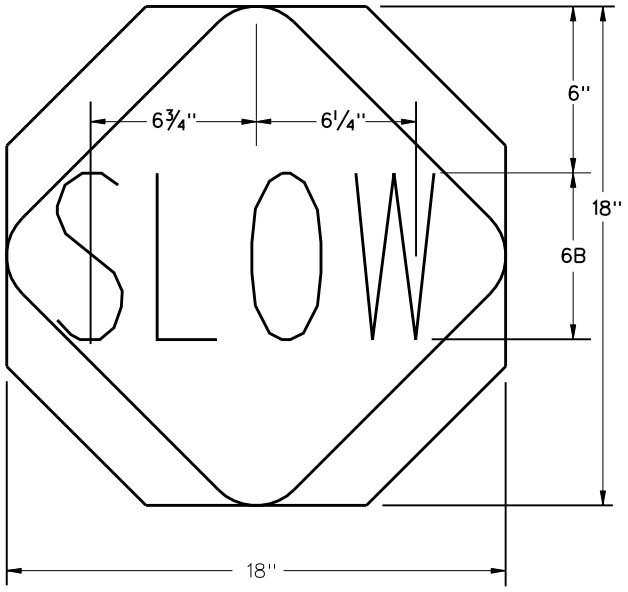
1306-28

SHEET 27 OF 31



Background - Red
Border - White
Legend - 6" Series C
To be made of : .08 aluminum or
.04 tempered aluminum



Background - Orange
Area outside diamond - Black or Light Blue
Legend - 6" Series B
To be made of : .08 aluminum or
.04 tempered aluminum

Figure 3 - 9

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HIGHWAY SIGN AND BARRICADES
(DETAILS FOR CONSTRUCTION PROJECTS)

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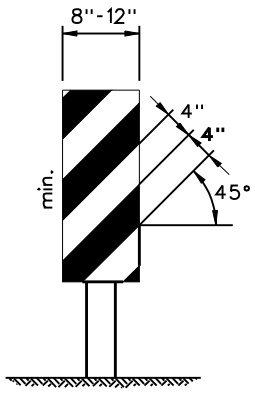
1306–29

SHEET 28 OF 31



VERTICAL PANEL

Figure 3 - 6

Vertical panels used as channelizing or warning devices shall be 8 to 12 inches width and a minimum of 24 inches in height. They shall be orange and white striped and reflectorized in the same manner as barricades and mounted with the top a minimum of 36 inches above the roadway. For panels less than 3' in height, 4" stripes shall be used. These devices may be used for traffic separation or shoulder barricading where space is at a minimum panels with stripes which begin at the upper right side and slope downward to the lower left side are to be designated as "right" panels (VP - 1R). Panels with stripes which begin at the uper left side and slope downward to the lower right side are to be designated as "left" panels (VP - 1L). For night time use, attach flashing warning lights on vertical panels when they are used singly and steady burn warning lights on vertical panels when they are used in a series for channelization.

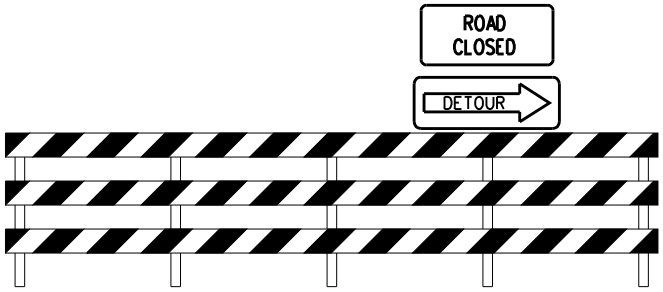


Figure 3 - 2 Barricade closing a road

Application of Barricades - Where a road is closed to traffic, Type III barricades shall be erected at the points of closure, and shall be extend across the roadway to a minimum of 2' from each edge. To futher discourage public motorists gaining access through the construction site by removing the barricades, the Type III barricades shall be anchored to the existing roadway if necessary. Four high intensity flashing warning lights shall be placed on the barricade as shown above. If only one lane of the travelway is closed by a barricade, two lights shall be used.

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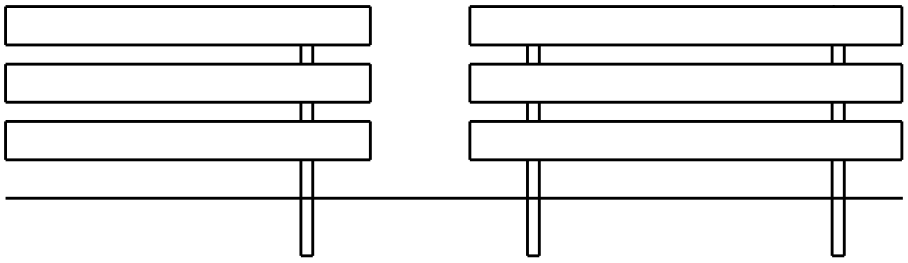
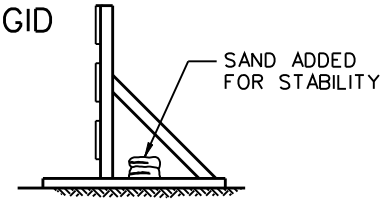
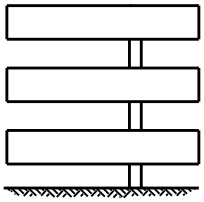
FIXED



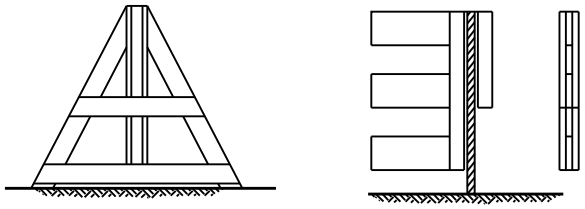
MOVABLE

RIDGID





DEMOUNTABLE



HINGED

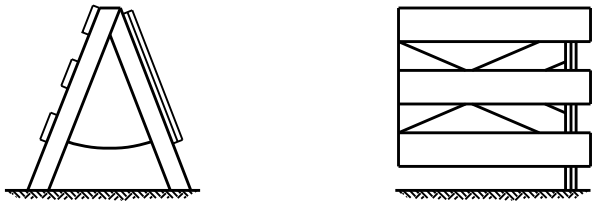


Figure 3 - 4

Type III barricade construction - Typical examples

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HIGHWAY SIGN AND BARRICADES

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STANDARD PLAN

1306–31

SHEET 30 OF 31

Barricade Design

A barricade is a portable or fixed device having from one to three rails with appropriate markings used to control traffic by closing, restricting or delineating all or a portion of the right - of - way.
Barricades shall be one of three types : Type I, Type II, or Type III. The characteristics of these types are shown in Figute 3-1 and Table 3-1.

Barricades with stripes which begin at the upper right side and slope downward to the lower left side are to be designated as "right" (R) barricades. Barricades with stripes which begin at the upper left side and slope downward to the lower lower right side are to be designated as "left" (L) barricades.

Making for barricade rails shall be alternate orange and white stripes (sloping downward at an angle of 45 degrees in the direction traffic is to pass).

Where a barricade extends entirely across a roadway, it is desirable that the stripes slope downward in the direction toward which traffic must turn in detourring. Where both right and left turns are provided for, the chevreo stripping may slope downward in both directions from the center of the barricade. Barricade rails should be support in a maner that will allow them to be seen by the motorist and provide a stable support not easily blown over by the wind or traffic. For type I barricade, the support may include other unstriped horizontal panels may include other unstriped horizontal panels necessary to provide stability. The name of the agency, contractor, or supplier shall not be shown on the face parts on any barricade. Identifification markings may be shown only the back side of barricade rails.

The entire area of orange and white shall be reflectorized using encapsulated lens reflective sheeting which will display the same approximate size, shape and color day and night. The predominant color for other barricade components may be used.

Barricades are located adjacent to traffic and therefore subject to impact by errant vehicles. Because of their vulnerable position and the possible harzard they shall be constructed of light weight materials and have no rigid stay bracing for "A" frame designs.

Barricade Application

Type I or Type II barricade are intended for use in situations where traffic is maintained through the area being constructed and/ or reconstructed. They may be used singly or in groups to mark a specific hazard or they may be used in a series for channelizing traffic. Type I barricades would normally be used on conventional roads or urban streets and arterials. As type II barricades have more reflective area, they are intended for use on expressways and freeways or other high speed roadways.

On high speed expressways or in other situation where barricades may be susceptible to overturning in the wind, sandbags should be used for ballasting. Sandbags may be placed on lower part of the frame or stays to provide the required ballast but shall not be placed on top of any stripe rail. Where maintenance activities are being performed, a street or highway condition is seldom of a character that will require a complete closing of the facility.

(For Continue see Plan 1306-31, Sheet 31 of 31)

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HIGHWAY SIGN AND BARRICADES
(DETAILS FOR CONSTRUCTION PROJECTS)

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(Continue sheet 30, Plan 1306-31)

When such a condition does occur, it is almost always an emergency situation, as would result from a broken watermain or a washedout culvert, for exemple. Repair work is generally initiated on an emergency basis and the street or road closing generally is of a kind wherein Type I is used.

On construction project, when a road section is closed to traffic, Type III barricades shall be erected at the points of closure. They may extend completely across a roadway and its shoulders or from curb to curb. Where provisions must be made for access of equipment and authorized vehicles, the Type III barricades shall be provided with gates or movable sections than can be closed when work is not in progress, or with indirect openings that will discourage public entry. Where access is provided through the Type III barricades, responsibility shall be assigned to a person to assure proper closure at the end of each working day. When a road or street is legally closed, but access must still be allowed for local traffic, the Type III barricade can not be erected completely across a roadway. Instead, an arrangement shall be devised that will permit local use but effectively discourage use by through traffic. A sign with the appropriate legend concerning permissable use by local traffic shall be installed above the barricade.

Wing Barricade

Wing barricades are a special application of Type III barricades, erected on the roadway shoulder (on one or both sides of pavement) to give the illusion of a narrowed or restricted roadway. In advance of a construction or maintenance area, even where no part of there roadway is actually closed, wing barricades serve a useful purpose in alerting the driver. If use in a series, they shall start at the outer edge of the shoulder and be brough progressively closer to the pavement. Wing barricades may be used as a mounting for the advance warning or guide signs or lighting devices. During periods of inactivity, a foldaway type of design may be advantageous. Examples of wing barricades are shown in figure 3 - 3.

Signs may be erected on barricades, particularly those of the fixed type, and they offer a most advantageous facility for this purpose. The ROAD CLOSED and Detour Arrow signs and the Large Arrow warning signs, for example, can effectively be mounted above the barricade that closed the roadway.

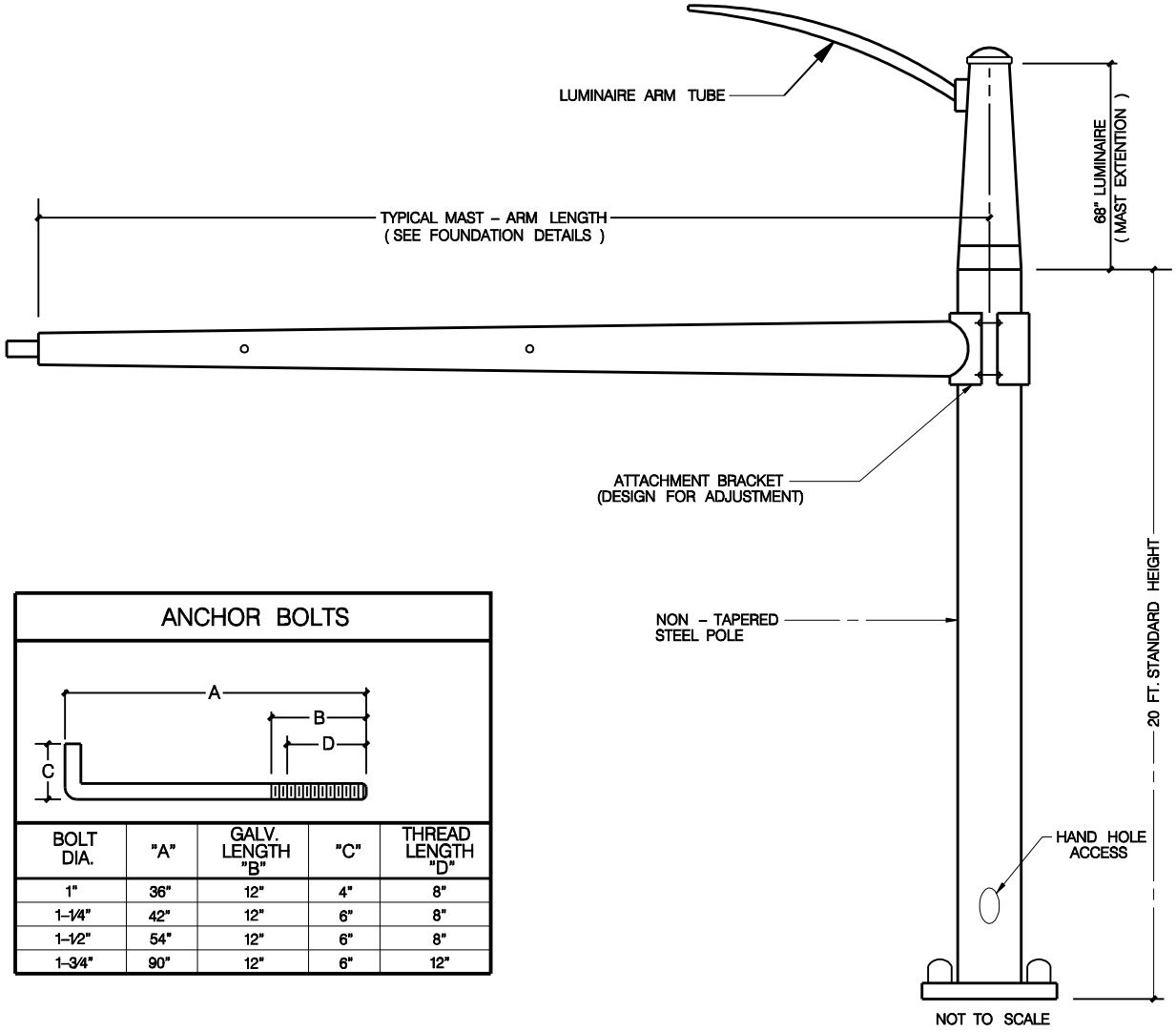
Construction and maintenance zones offen encroach into sidewalks or crosswalks necessitating provisions for alternate routing. Where it is not possible to a path and divert the pedestrians to other walkways, barricades may be used to define the path. Flashers shall be used on sidewalk barricades in accordance with the following paragraph; however, where high levels of illumination exist for sidewalk areas the use of flashers on barricades may not be needed.

For night time use, add flashing warning lights when barricades are used singly and used in a series for chanelization.

STANDARD PLAN

1302–1

SHEET 1 OF 2



ANCHOR BOLTS

BOLT DIA.	"A"	GALV. LENGTH "B"	"C"	THREAD LENGTH "D"
1"	36"	12"	4"	8"
1–1/4"	42"	12"	6"	8"
1–1/2"	54"	12"	6"	8"
1–3/4"	90"	12"	6"	12"

CITY OF SHREVEPORT

MAST – ARM SPECIFICATIONS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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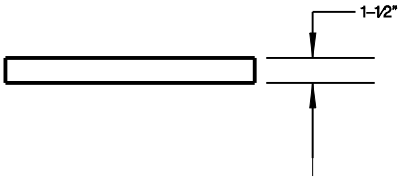
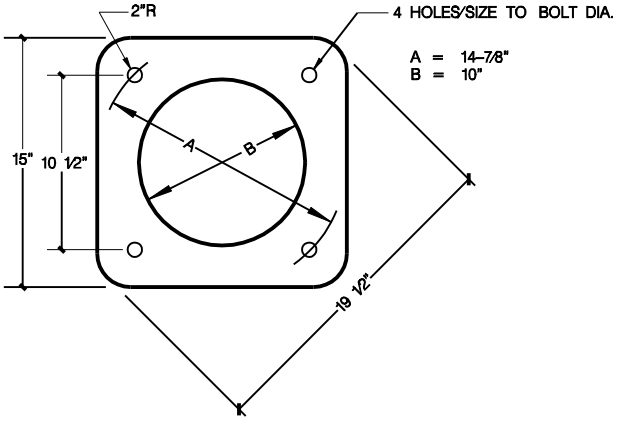
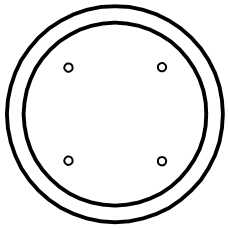
STANDARD PLAN

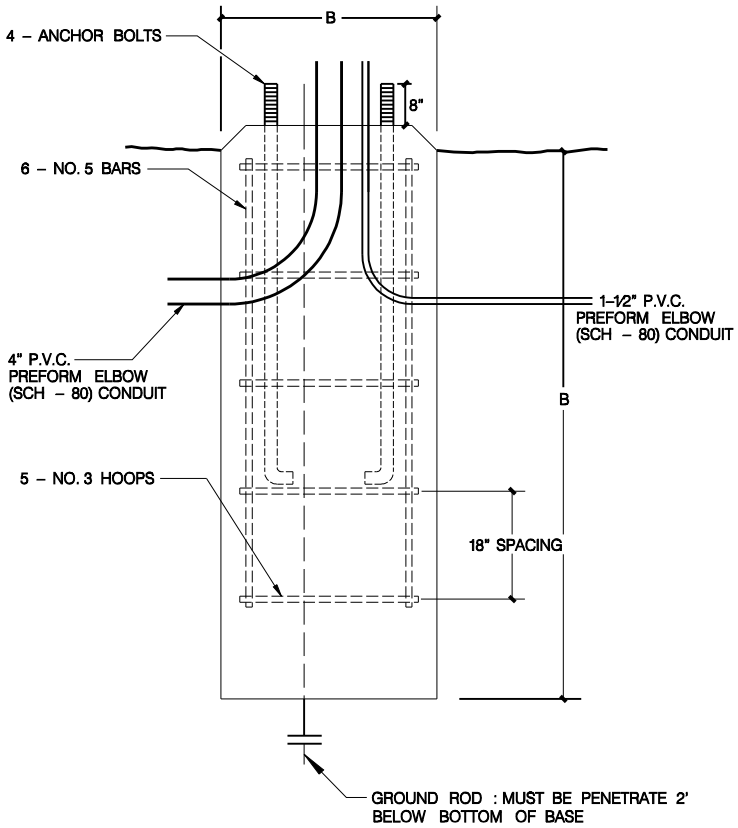
1302–2

SHEET 2 OF 2









FOUNDATION DETAILS				
ARM LENGTH	BOLT DIA.	BOLT LENGTH	A	B
25 FT.	1–3/4"	54" *	36"	10'
30 FT.	"	" *	"	"
35 FT.	"	" *	"	"
40 FT.	"	" *	"	"
45 FT.	1–3/4"	90"	"	"

* WELD ED CAGE TO BE ATTACHED TO BOLTS.
MAY USED 90" BOLT IN LIEU OF 54" WITH CAGE.

CITY OF SHREVEPORT

MAST – ARM SPECIFICATIONS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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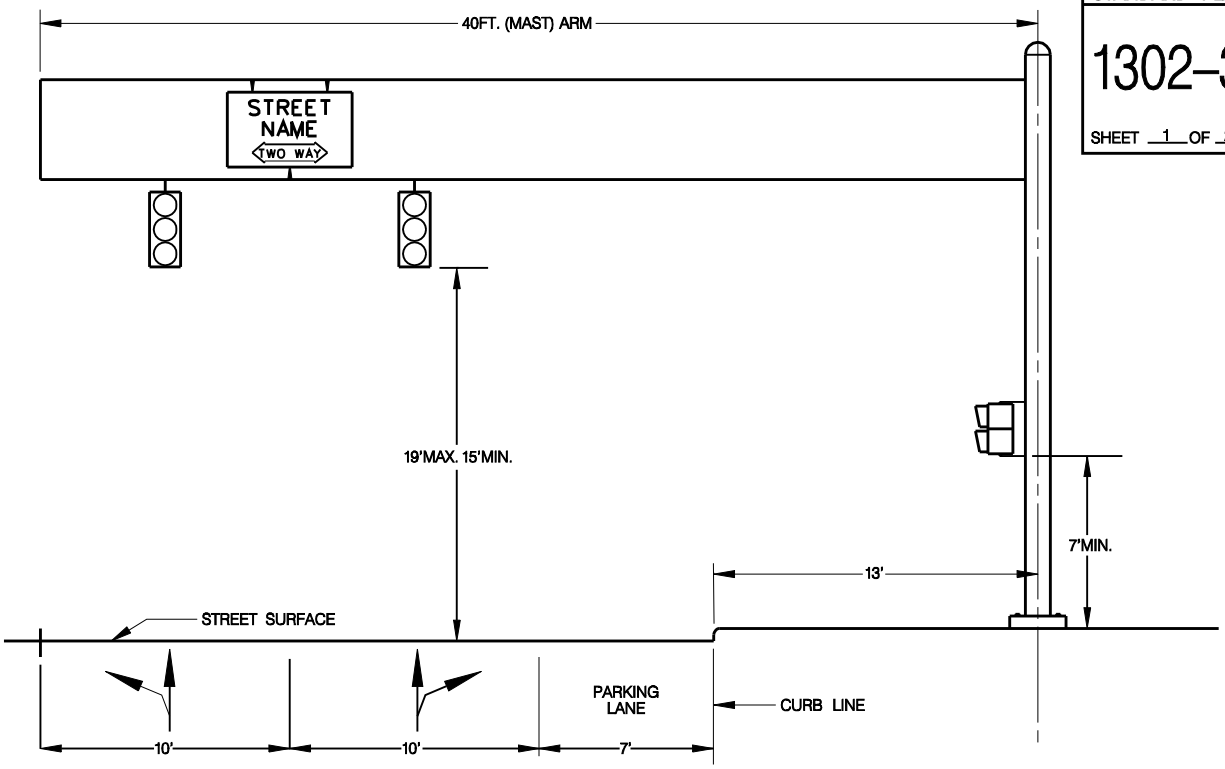
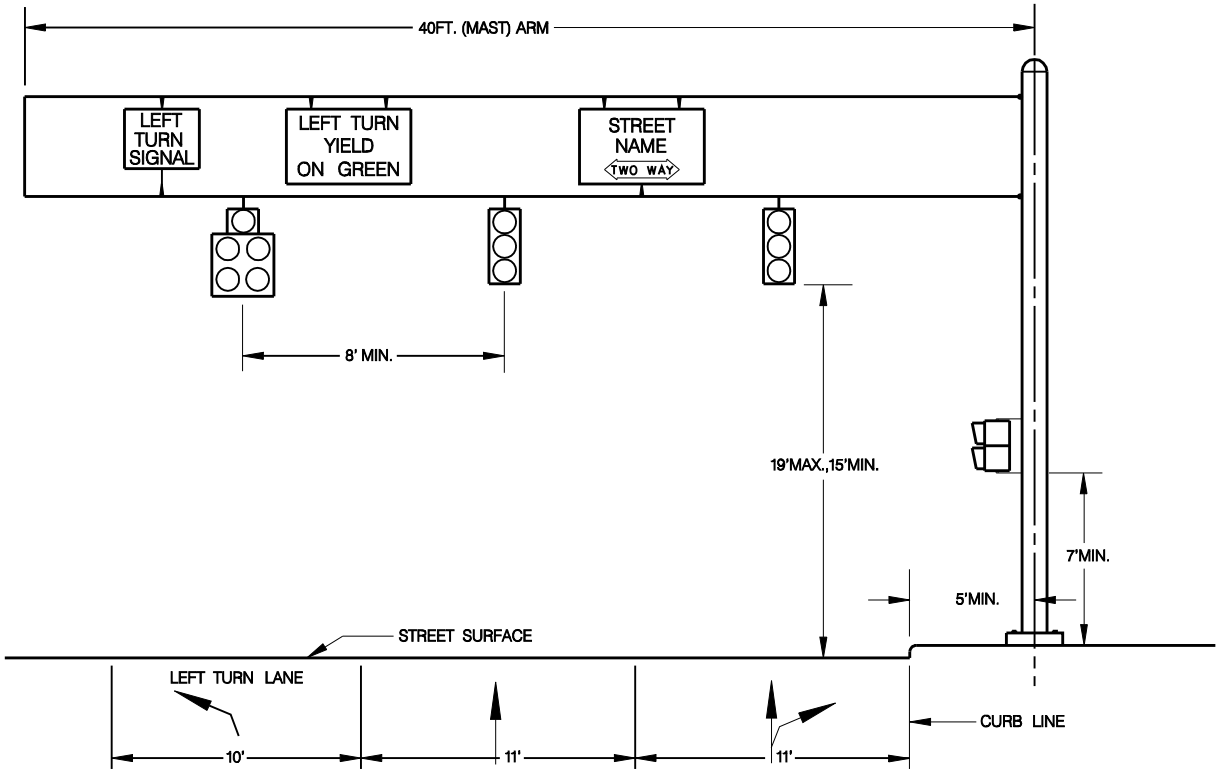
STANDARD PLAN

1302–3

SHEET 1 OF 2



40 FT. MAST – ARM WITH TRAFFIC SIGNAL



40 FT. MAST – ARM WITH TRAFFIC SIGNAL

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MAST – ARM WITH TRAFFIC SIGNAL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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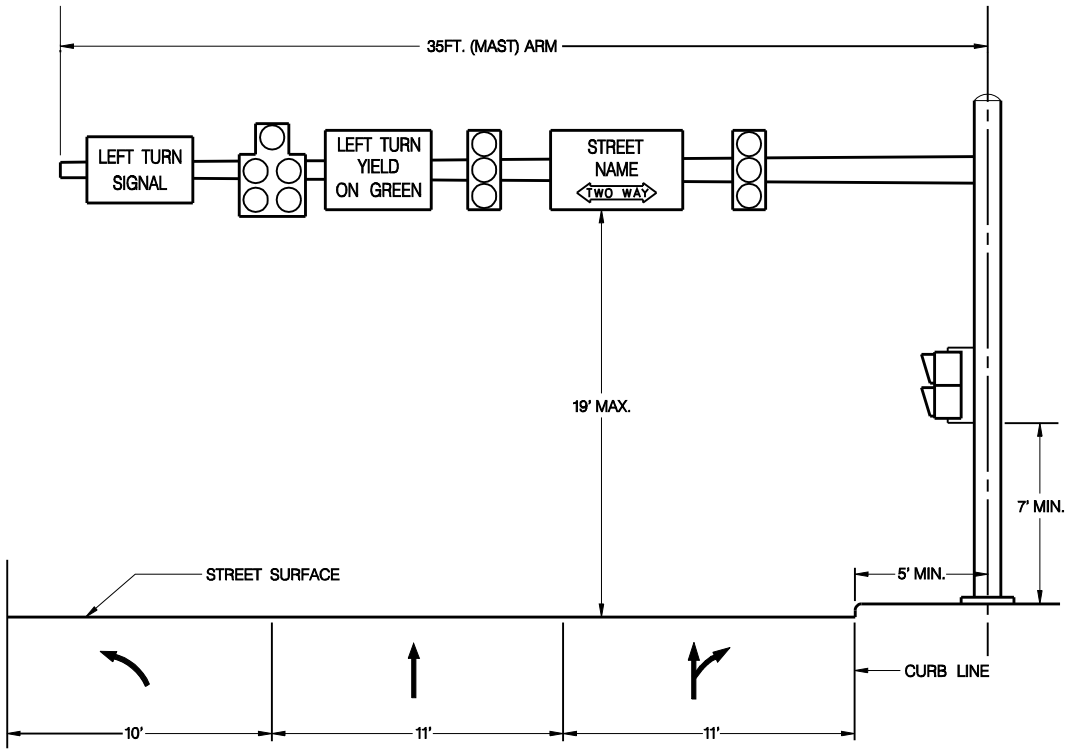
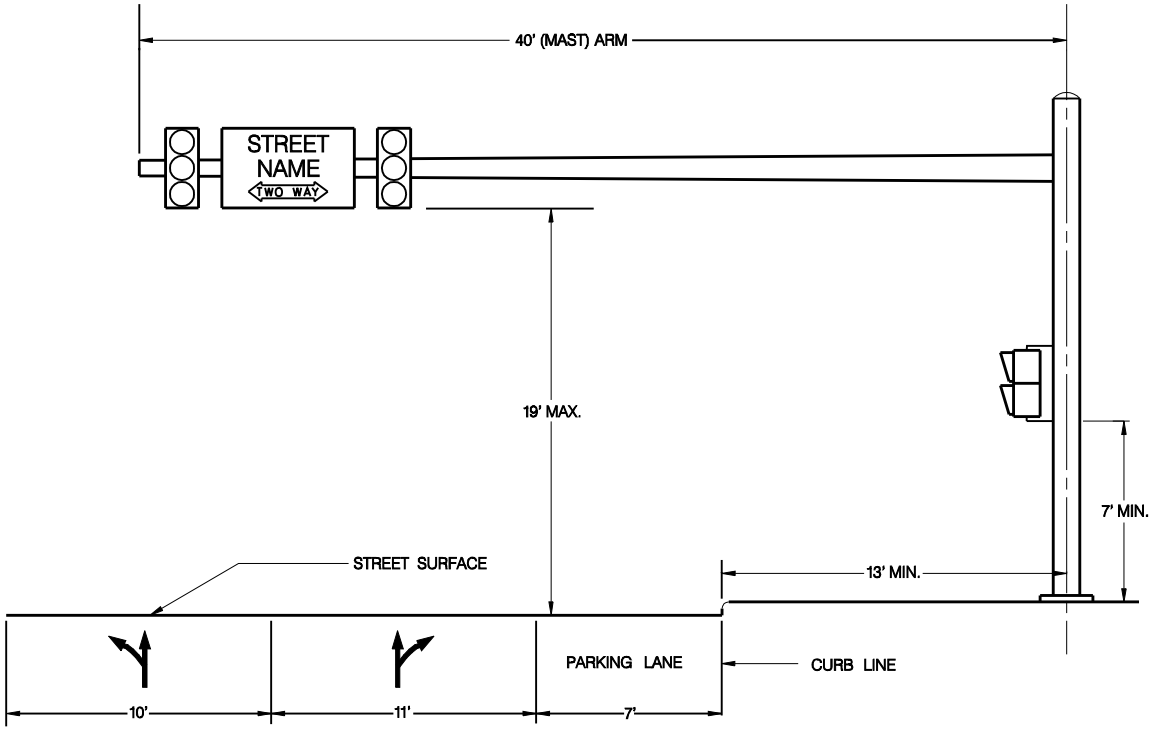
STANDARD PLAN

1302–4

SHEET 2 OF 2



35 FT. MAST – ARM WITH TRAFFIC SIGNAL



40 FT. MAST – ARM WITH TRAFFIC SIGNAL

CITY OF SHREVEPORT

MAST – ARM WITH TRAFFIC SIGNAL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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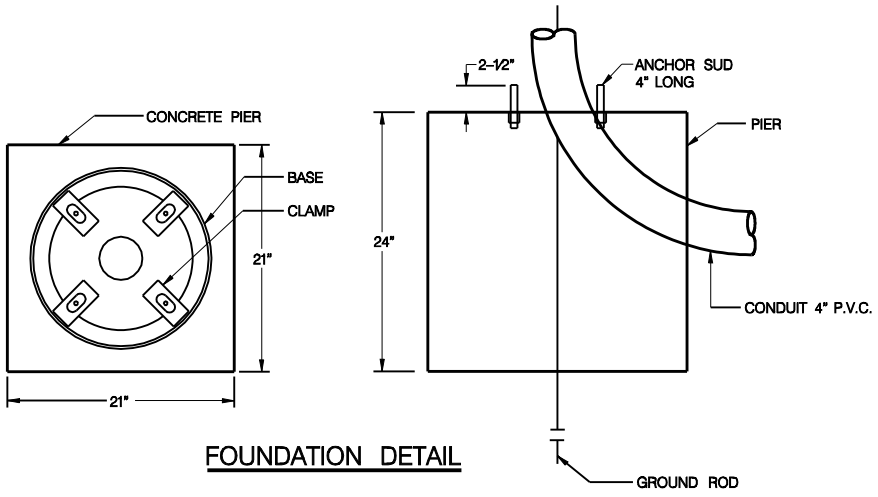
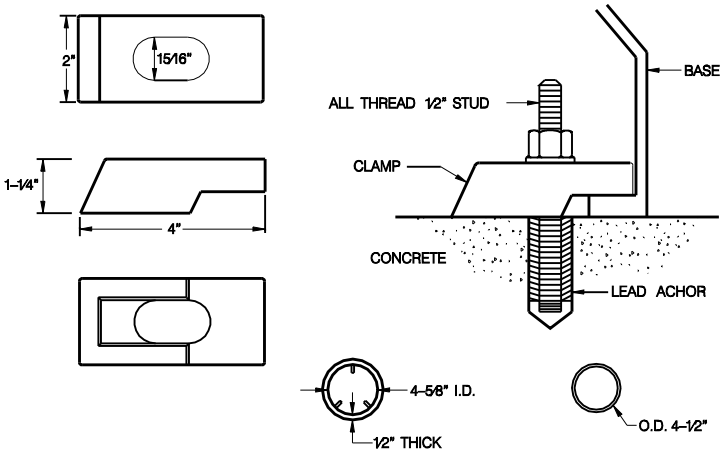
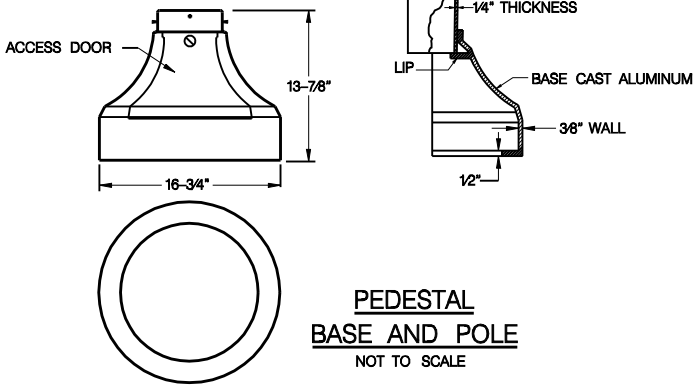


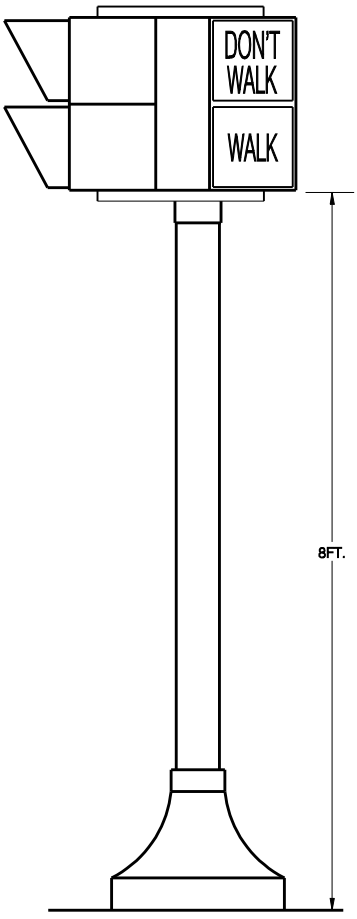
FOUNDATION DETAIL



BASE CLAMP



PEDESTAL
BASE AND POLE
NOT TO SCALE



PEDESTRIAN SIGNAL

CITY OF SHREVEPORT

PEDESTAL MOUNTED SIGNAL INSTALLATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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1302–6

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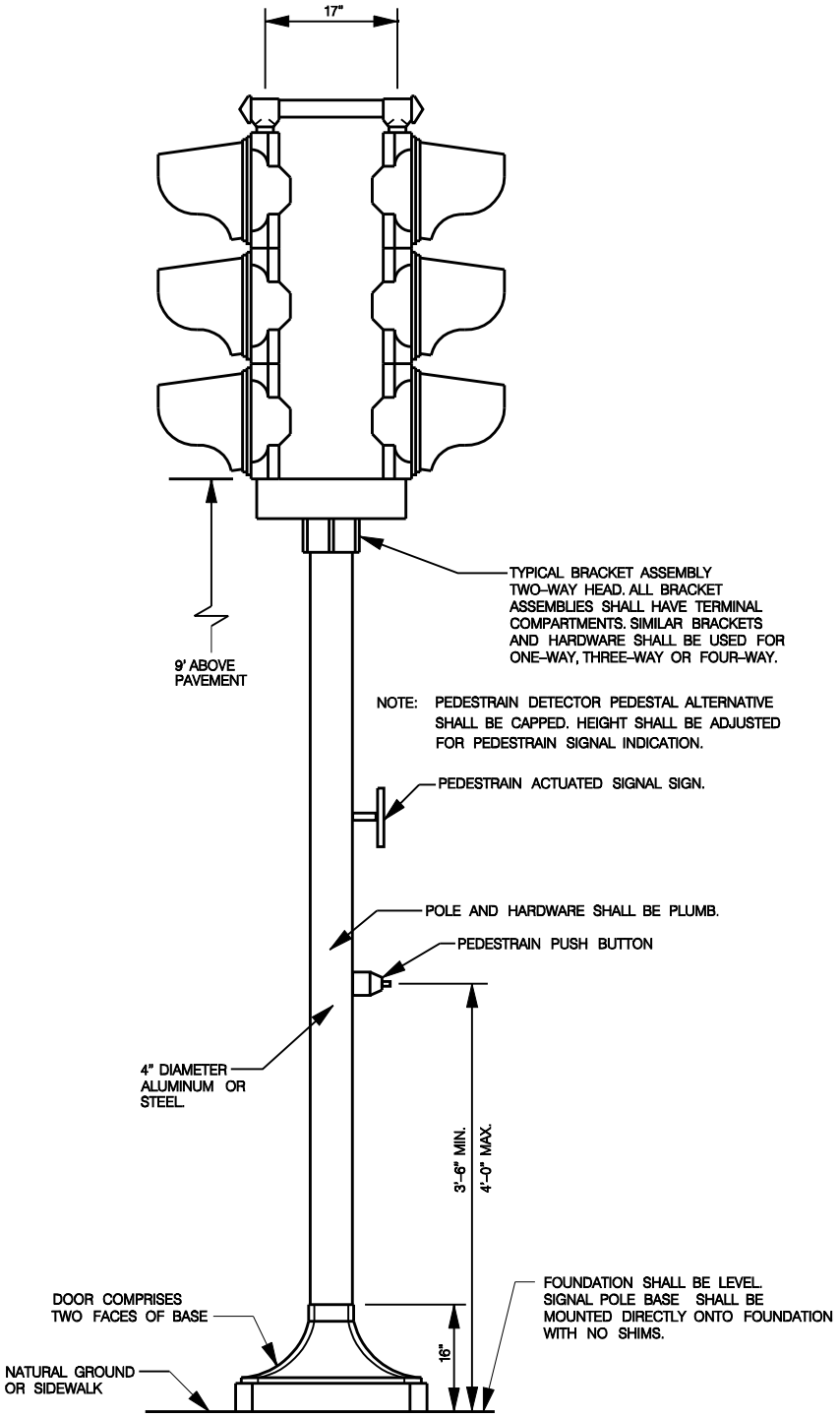

PEDESTAL MOUNTED
SIGNAL INSTALLATION

CITY OF SHREVEPORT

PEDESTAL MOUNTED SIGNAL INSTALLATION

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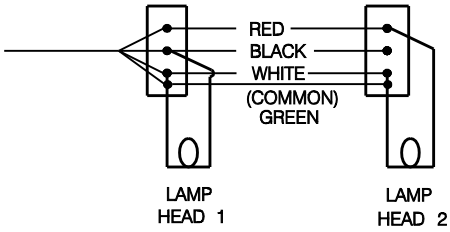
WIRING DETAILS FOR HANGERS & HEADS

FLASHING BEACON:



HEADS SHALL BE WIRED FOR ALTERNATE FLASH TO EACH APPROACH.

NO SPARE CONDUCTORS REQUIRED

RED – FLASH CIRCUIT #1
BLACK – FLASH CIRCUIT #2
WHITE– AC COMMON
GREEN – CASE GROUND

TRAFFIC SIGNAL HEAD & DISCONNECT HANGER TERMINATION

	INDICATIONS	TERMINAL BLOCK	2–6 CONDUCTOR CABLES		1–10 CONDUCTOR CABLE
HEAD 1	GREEN	1	BLUE	CABLE 1	BLUE
	AMBER	2	ORANGE	CABLE 1	ORANGE
	RED	3	RED	CABLE 1	RED
HEAD 2	GREEN	4	BLUE	CABLE 2	G/BLACK
	AMBER	5	ORANGE	CABLE 2	O/BLACK
	RED	6	RED	CABLE 2	R/BLACK
	COMMON	7	WHITE	CABLE 1 & 2	WHITE
	GREEN ARROW	8	BLACK	CABLE 1	BLACK
	AMBER ARROW	9	BLACK	CABLE 2	W/BLACK
		10	GREEN	CABLE 1 & 2	GREEN
		11			
	CASE GROUND	12			

NOTE: EIGHTEEN –CIRCUIT DISCONNECT HANGERS SHALL BE SIMILARLY WIRED WITH SOLID INDICATIONS WIRED FIRST FOLLOWED BY ARROW INDICATIONS. ON SPAN MOUNTED SIGNAL INSTALLATIONS, ALL BULBS SHALL BE INDIVIDUALLY WIRED FROM CONTROLLER. ALL CABLES SHALL BE CONTINOUS RUN WITHOUT SPLICES EXCEPT AS SHOWN FOR MAST ARM INSTALLATIONS AT DISCONNECT HANGERS SHOWN ON PLANS OR WHERE JUNCTIONS ARE SHOWN ON THE PLANS. ALL WIRES SHALL BE TERMINATED IN HANGER. CONDUCTORS THAT ARE UNUSED IN SIGNAL THAT DO NOT HAVE INDICATIONS SHOWN ABOVE SHALL BE SPARE CONDUCTORS AND SHALL NOT BE USED. THE HARNESS FROM THE SIGNAL TERMINAL BLOCK SHALL BE WIRED IN ACCORDANCE TO THE ABOVE TABLE UNUSED CONDUCTORS SHALL BE BONELESS IN HEAD WITH ENDS TAPED TO PREVENT GROUNDING TO CASES.

NOTE: EIGHTEEN –CIRCUIT DISCONNECT HANGERS SHALL BE SIMILARLY WIRED WITH SOLID INDICATIONS WIRED FIRST FOLLOWED BY ARROW INDICATIONS. ON SPAN MOUNTED SIGNAL INSTALLATIONS, ALL BULBS SHALL BE INDIVIDUALLY WIRED FROM CONTROLLER. ALL CABLES SHALL BE CONTINOUS RUN WITHOUT SPLICES EXCEPT AS SHOWN FOR MAST ARM INSTALLATIONS AT DISCONNECT HANGERS SHOWN ON PLANS OR WHERE JUNCTIONS ARE SHOWN ON THE PLANS. ALL WIRES SHALL BE TERMINATED IN HANGER. CONDUCTORS THAT ARE UNUSED IN SIGNAL THAT DO NOT HAVE INDICATIONS SHOWN ABOVE SHALL BE SPARE CONDUCTORS AND SHALL NOT BE USED. THE HARNESS FROM THE SIGNAL TERMINAL BLOCK SHALL BE WIRED IN ACCORDANCE TO THE ABOVE TABLE UNUSED CONDUCTORS SHALL BE BONELESS IN HEAD WITH ENDS TAPED TO PREVENT GROUNDING TO CASES.

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PEDESTAL MOUNTED SIGNAL INSTALLATION

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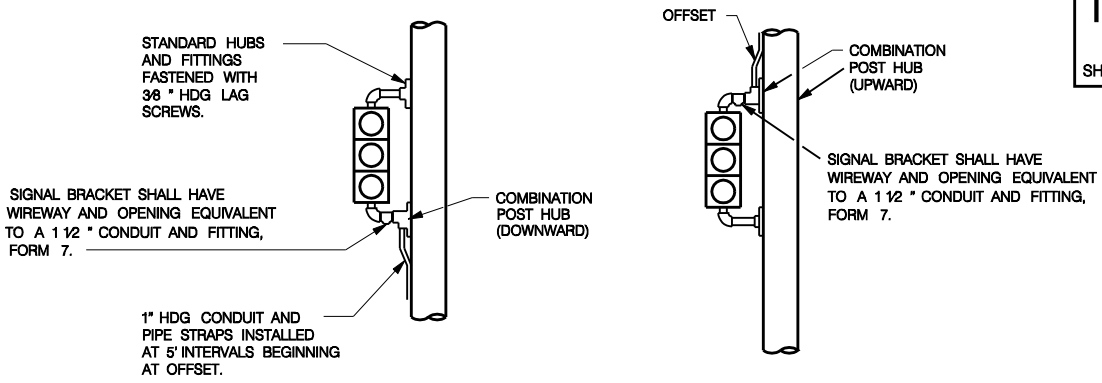
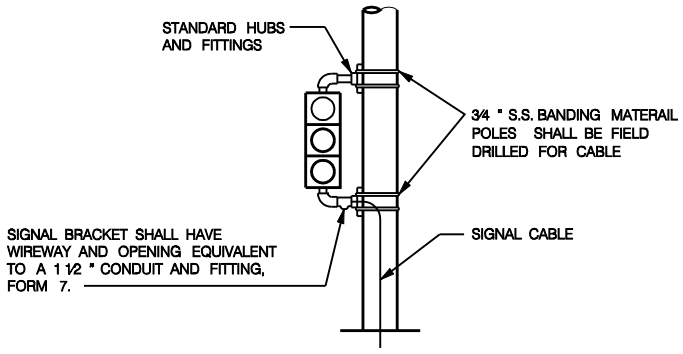
WOOD POLE

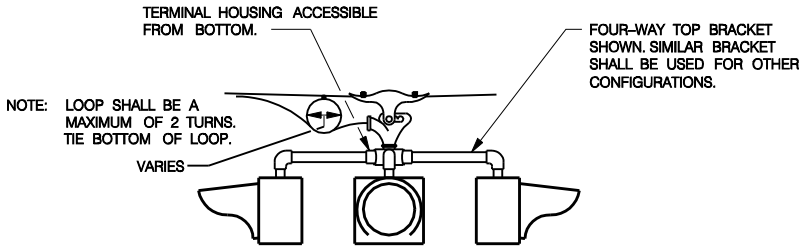


METAL POLE



BRACKET MOUNTED TRAFFIC SIGNALS

NOTE: TWO–WAY AND THREE–WAY SIGNAL HEADS AND PEDESTRIAN HEADS SHALL BE SIMILARLY MOUNTED WITH APPROPRIATE HARDWARE. CLEARANCE FROM BOTTOM OF SIGNAL HEAD TO PAVEMENT OR NATURAL GROUND SHALL BE 9' OR SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.



SPAN WIRE FLASHING BEACON MOUNT

ONE 4–WAY HEAD
ALL HEADS SHALL BE VERTICALLY ALIGNED

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DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

PEDESTAL MOUNTED SIGNAL INSTALLATION

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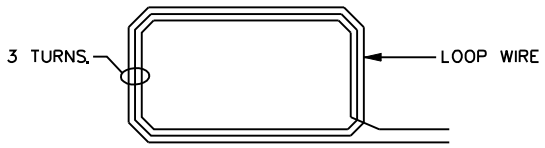
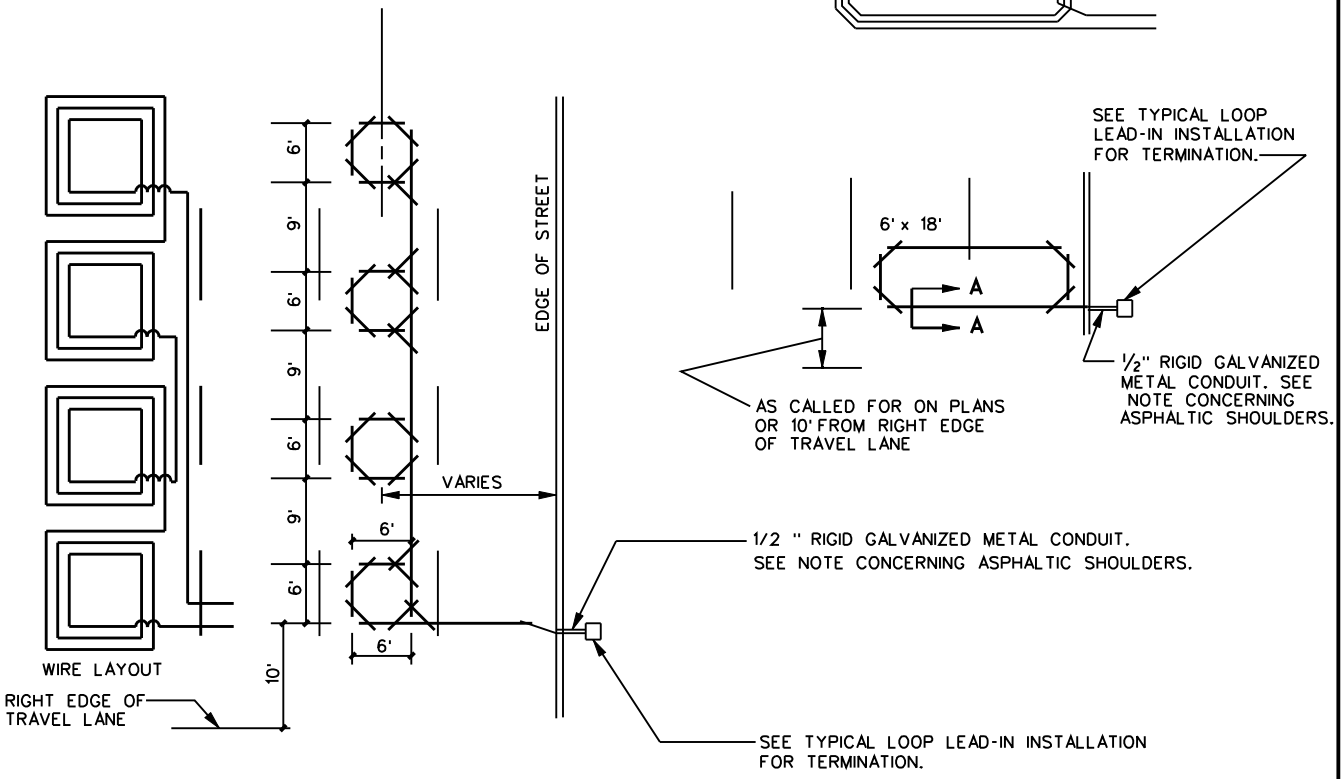
SHEET 1 OF 3

NOTE: LOOPS CENTERED ON LANE WIDTH WILL VARY DEPENDENT ON LANE WIDTH AND WILL NOT BE UNIFORM OVER LENGTH OF LOOP SHALL FIT DETECTION ZONE AS SHOWN ON PLANS.





NOTES:

1. LOOPS SHALL CONSIST OF A CONTINUOUS LENGTH OF NO. 14 AWG, 19-STRAND WIRE, INSULATED BY A CROSS-LINKED THERMOSETTING BLACK POLYETHYLENE COMPOUND (ASTM D-2655-80).
2. THE CONDUCTOR SHALL BE COPPER AND SHALL, BEFORE INSULATING, CONFORM TO THE REQUIREMENTS OF ASTM B-3.
3. THE STRANDED CONDUCTOR SHALL UTILIZE EITHER CONCENTRIC OR BUNCH STRANDING AND SHALL CONFORM TO THE CIRCULAR MIL AREA AND PHYSICAL REQUIREMENTS SPECIFIED IN ASTM DESIGNATION B-8, OR ASTM DESIGNATION B-174, FOR BUNCH STRANDING.
4. THE INSULATION SHALL BE APPLIED CONCENTRICALLY ABOUT CONDUCTOR. THE THICKNESS OF THE INSULATION SHALL BE NOT LESS THAN 0.030 INCHES AT ANY POINT WITH A MINIMUM AVERAGE THICKNESS OF 0.035 INCHES. THE METHOD OF MEASUREMENT AND THE APPARATUS USED SHALL BE IN ACCORDANCE WITH UNDERWRITERS LABORATORIES, INCORPORATED STANDARD UL62 (ANSI C33.1).
5. THE INSULATION OF THE FINISHED CONDUCTOR SHALL WITHSTAND WITHOUT BREAKDOWN THE APPLICATION OF A 60 OR 3000 HERTZ, 7500 VOLT (RMS) ESSENTIALLY SINUSOIDAL SPARK TEST POTENTIAL IN ACCORDANCE WITH THE METHOD AND USING EQUIPMENT SPECIFIED IN UNDERWRITERS LABORATORIES, INCORPORATED STANDARD UL83 (ANSI C33.8).
6. LOOP WIRE SHALL CONFORM TO IMSA SPECIFICATION 51-5 EXCEPT WHERE MODIFIED BY THESE SPECIFICATIONS.
7. THE INSULATED CONDUCTOR SHALL BE COMPLETELY ENCASED IN A TUBE OF LOW DENSITY POLYETHYLENE CONFORMING TO THE FOLLOWING DIMENSIONS:

NOMINAL OUTSIDE DIAMETER	.24 INCH
MAXIMUM OUTSIDE DIAMETER	.25 INCH
NOMINAL INSIDE DIAMETER	.173 INCH
MAXIMUM INSIDE DIAMETER	.190 INCH
NOMINAL WALL THICKNESS	.030 INCH
MAXIMUM WALL THICKNESS	.035 INCH

THE NAME OF THE MANUFACTURER, THE YEAR OF MANUFACTURE, AND ANY APPLICABLE PART NUMBER SHALL BE PRINTED ON THE ENCASING TUBE AT INTERVALS OF 27 INCHES OR LESS

8. SLOTS SHALL BE CLEANED OF LOOSE MATERIAL. THE WIRE SHALL BE CAREFULLY INSTALLED TO ENSURE THE INSULATION IS NOT DAMAGED.

TYPICAL SAW-CUT LAYOUT

CITY OF SHREVEPORT

TRAFFIC SIGNAL & INSTALLATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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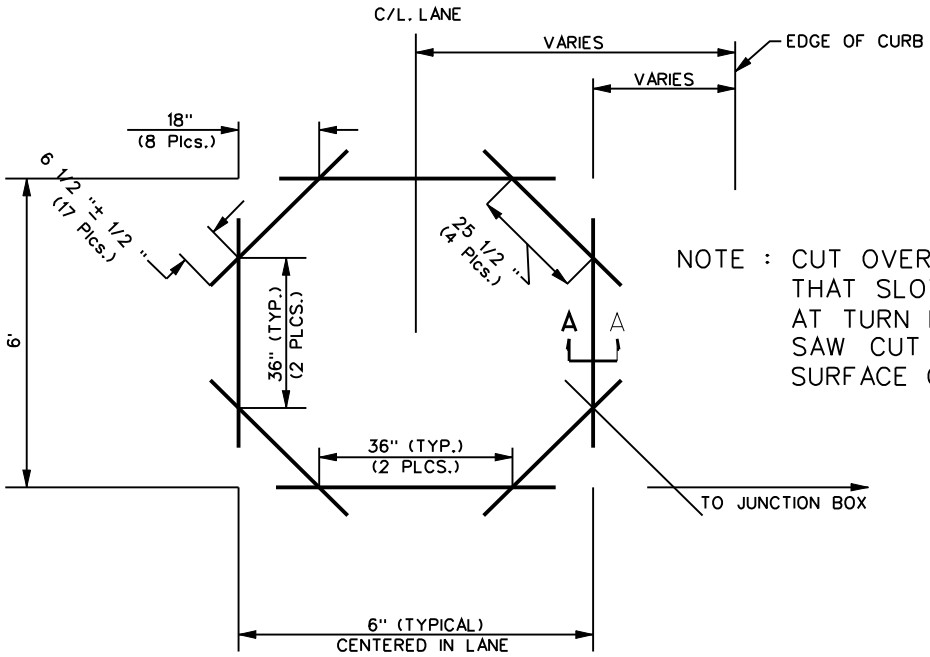
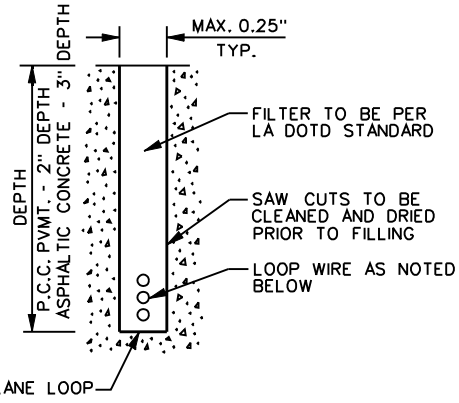


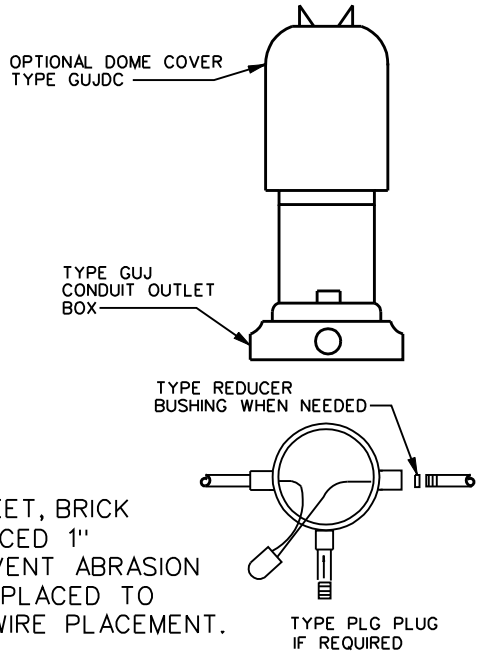
NOTE : CUT OVERLAPPED, SO THAT SLOT IS FULL DEPTH AT TURN POINTS (TYPICAL). SAW CUT SHOWN IS ON SURFACE OF PAVEMENT.

NOTE : SAW CUT DO NOT MEET AT CORNER OF RECTANGLE. DIMENSIONS SHOWN ARE REQUIRED FOR USING 18" SAW BLADE. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CORRECT DEPTH REGARDLESS OF BLADE SIZE, UNLESS OTHERWISE NOTED IN PLANS.

LOOP SAW-CUT CONFIGURATION



SECTION "A - A"



NOTE : WHERE LOOP IS TO BE PLACED IN BRICK STREET, BRICK SHALL BE TAKEN UP AND THE LOOP WIRE PLACED 1" BELOW THE BRICK BEDDING SURFACE TO PREVENT ABRASION BETWEEN BRICK AND WIRE. BRICK SHALL BE REPLACED TO ORIGINAL GRADE UPON COMPLETION OF LOOP WIRE PLACEMENT.

SAW- CUTTING PAVEMENT & LOOP WIRE

CITY OF SHREVEPORT

TRAFFIC SIGNAL & INSTALLATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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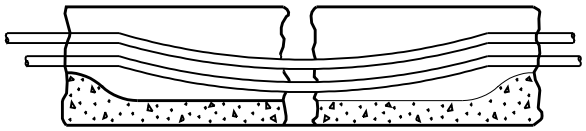
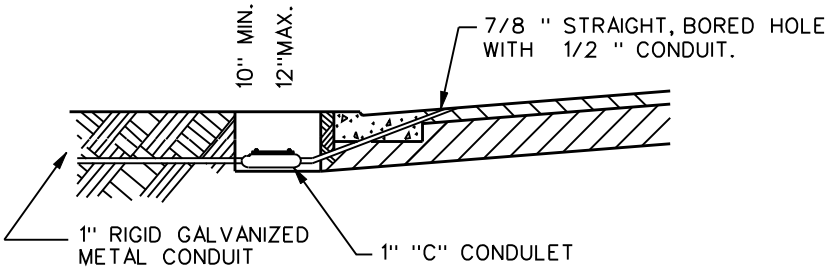
LEAVE WIRE SLACK



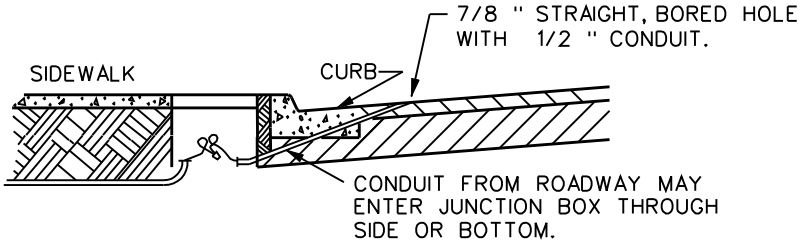
PAVEMENT JOINT & CRACK SECTION

NOTE: DROP SAW BLADE DOWN TO ALLOW SLACK IN CABLE.
JOINT LESS THAN 1/2 "-- ALL OTHER SHALL NOT BE CROSSED EXCEPT AS DIRECTED BY ENGINEER.



NOTE: CONDUIT SEALED PRIOR TO LOOP SEALANT BEING POURED.
IDENTIFY LOOP WIRES WITH PERMANENT LABEL MARKED WITH CONTROLLER PHASE.

NOTE: TYPE D 12"X12" FOOTED JUNCTION BOX, H-10 LOAD. INSTALL WHERE SIDEWALKS ARE EXISTING,"C" CONDULET AS ABOVE IF NO SIDEWALK.



TYPICAL LOOP LEAD-IN INSTALLATION

NOTES:

1. CONTRACTOR SHALL PROVIDE 1/2 " CONDUIT FROM JUNCTION BOX AND TERMINATE BELOW GROUND SO THAT IT DIRECTLY RECEIVES LOOP LEAD-IN WIRE.
2. LOOP INSTALLATION IN PAVEMENT WITH OVERLAYS LESS THAN 3" OVER CONCRETE, REQUIRES A DEEPER DEPTH SHALL BE CUT. THE DEPTH REQUIRED SHALL PRODUCE A 1" SAW CUT INTO THE CONCRETE AND SHALL BE DETERMINED AT THE JOB SITE. THE SAW CUT SHALL BE APPROVED BY THE PROJECT ENGINER PRIOR TO THE WIRE INSTALLATION.
3. FOR LOOP INSTALLATIONS IN ROADWAY THAT HAS ASPHALT SHOULDERS, THE 1/2 " CONDUIT SHOWN ABOVE SHALL BE EXTENDED THROUGH A TRENCH IN THE SHOULDER TO A JUNCTION BOX OR CONDULET INSTALLED OUTSIDE THE SHOULDER.

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CITY OF SHREVEPORT

TRAFFIC SIGNAL & INSTALLATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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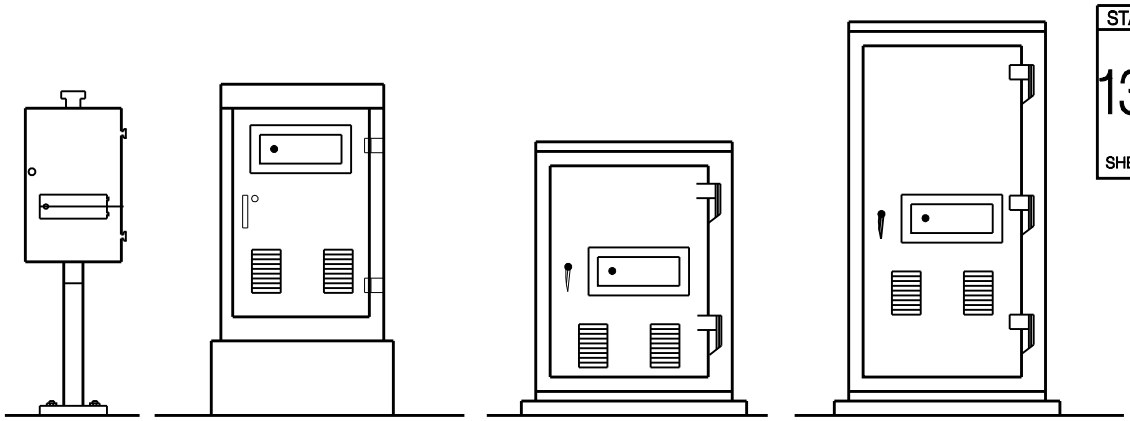


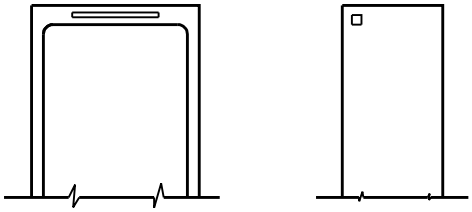
G M P R

TYPE OF CABINET

TYPE	APPROXIMATE SIZE		
	HEIGHT	WIDTH	DEPTH
G	35"	21"	15"
M	48"	30"	16"
P	54"	44"	26"
R	77"	44"	26"

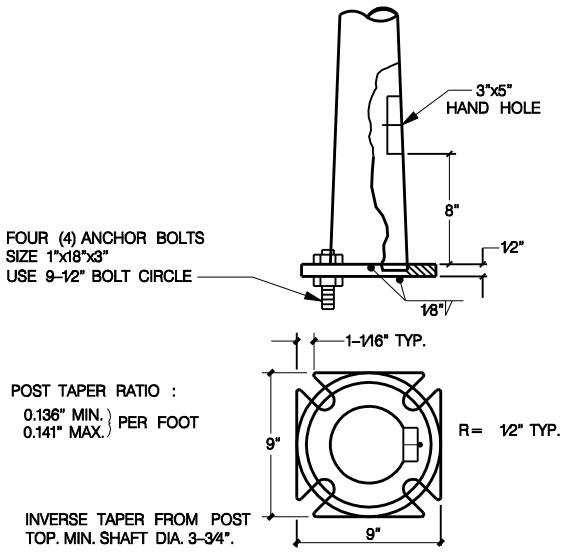
CABINET DIMENSIONS

CABINET WITH ANY DIMENSION VERYNG MORE THAN 1 INCH FROM APPROXIMATE SIZE SHALL BE APPROVED BY ENGINEER BEFORE INSTALLATION

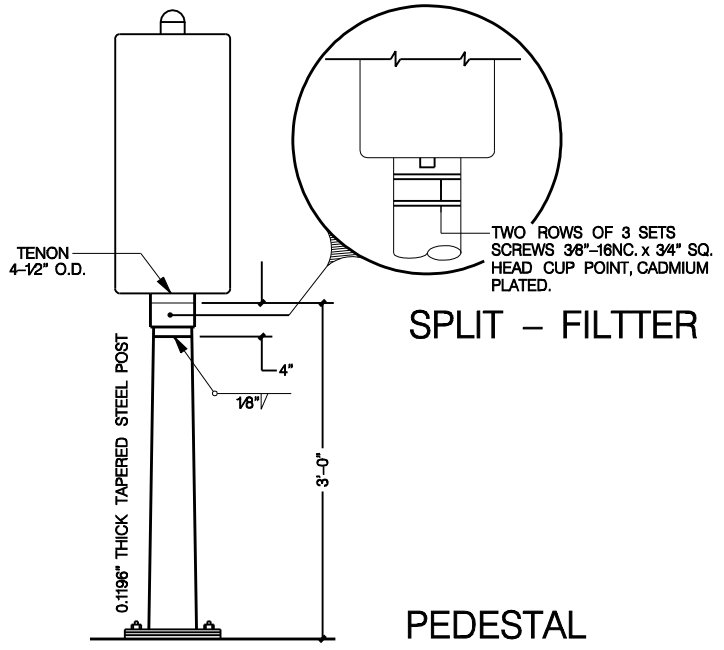


CABINET LIGHT

INSTALL A 15 WATT, 18 INCH FLUORESCENT LIGHT AT THE FRONT AND ABOVE DOOR IN TYPE M, P AND R CABINETS. LIGHTS SWITCH SHALL BE MOUNTED ADJACENT TO INTERNALLY ACCESSIBLE AUXILIARY SWITCHES OR AUTOMATICALLY OPERATE WHEN DOOR IS OPEN.



PEDESTAL BASE



SPLIT - FILTTER

PEDESTAL

CITY OF SHREVEPORT

CONTROLLER CABINET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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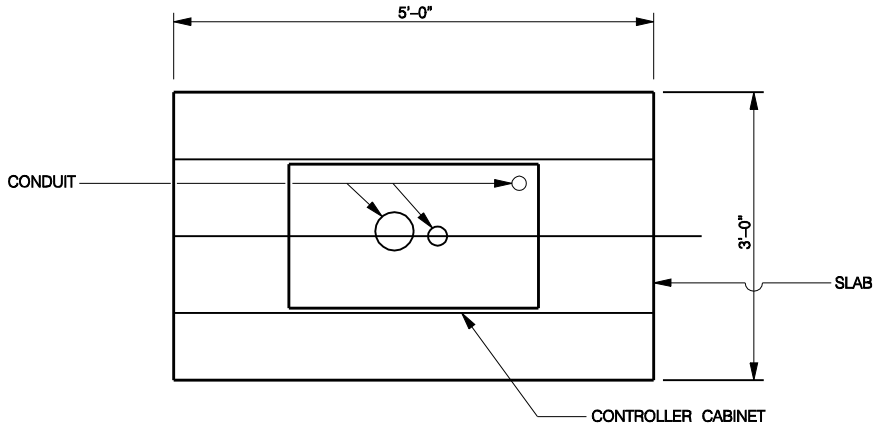
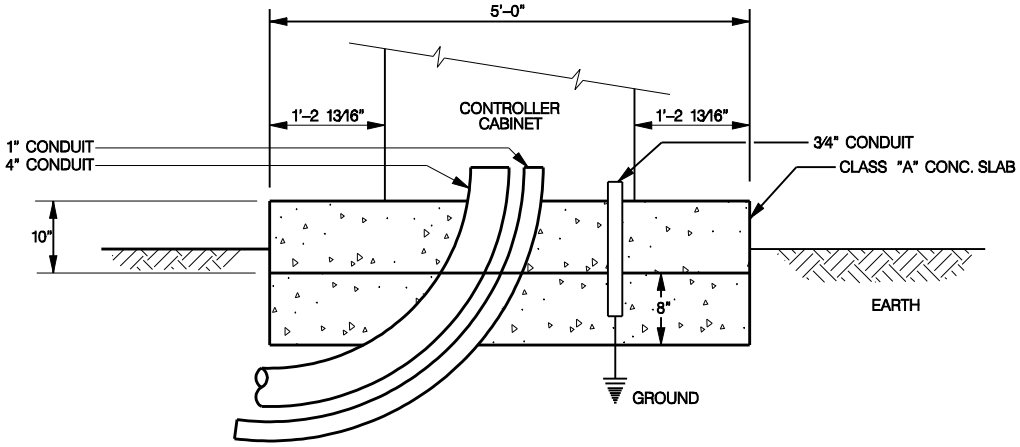
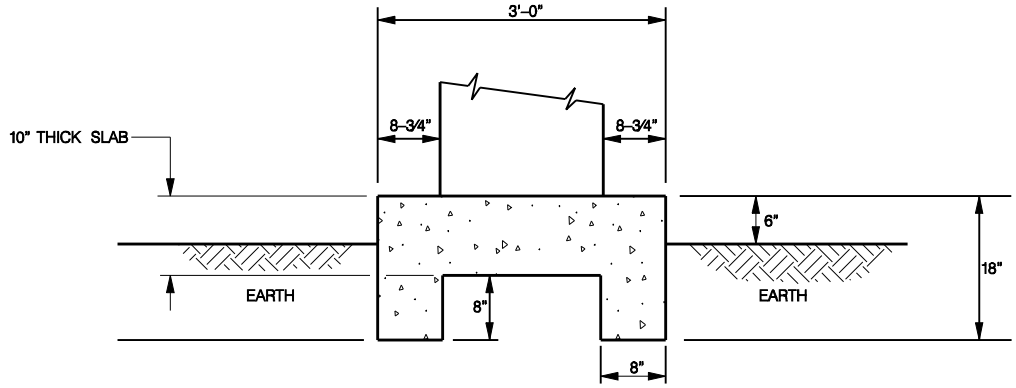


TOP VIEW



FRONT VIEW



SIDE VIEW

CITY OF SHREVEPORT

GROUND MOUNTED CONTROLLER CABINET

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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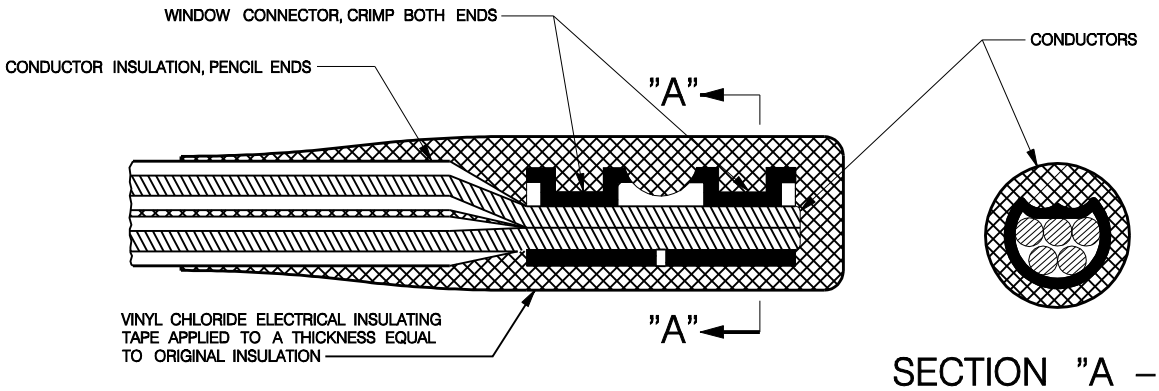
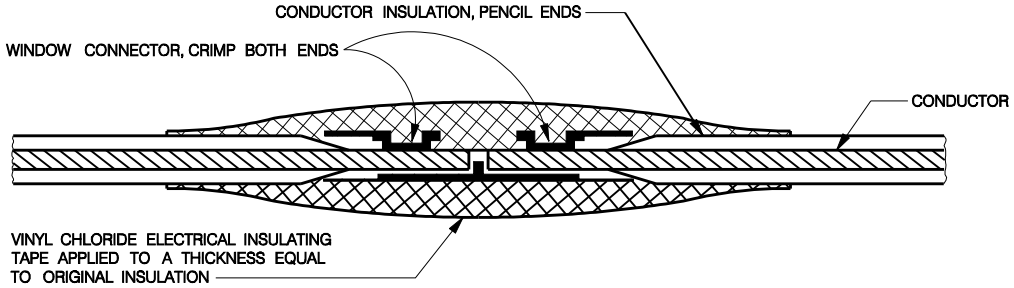
SHEET 1 OF 1



SECTION "A – A"

MULTIPLE CONDUCTOR TYPE



SINGLE CONDUCTOR TYPE

CITY OF SHREVEPORT

CONDUCTOR SPLICING

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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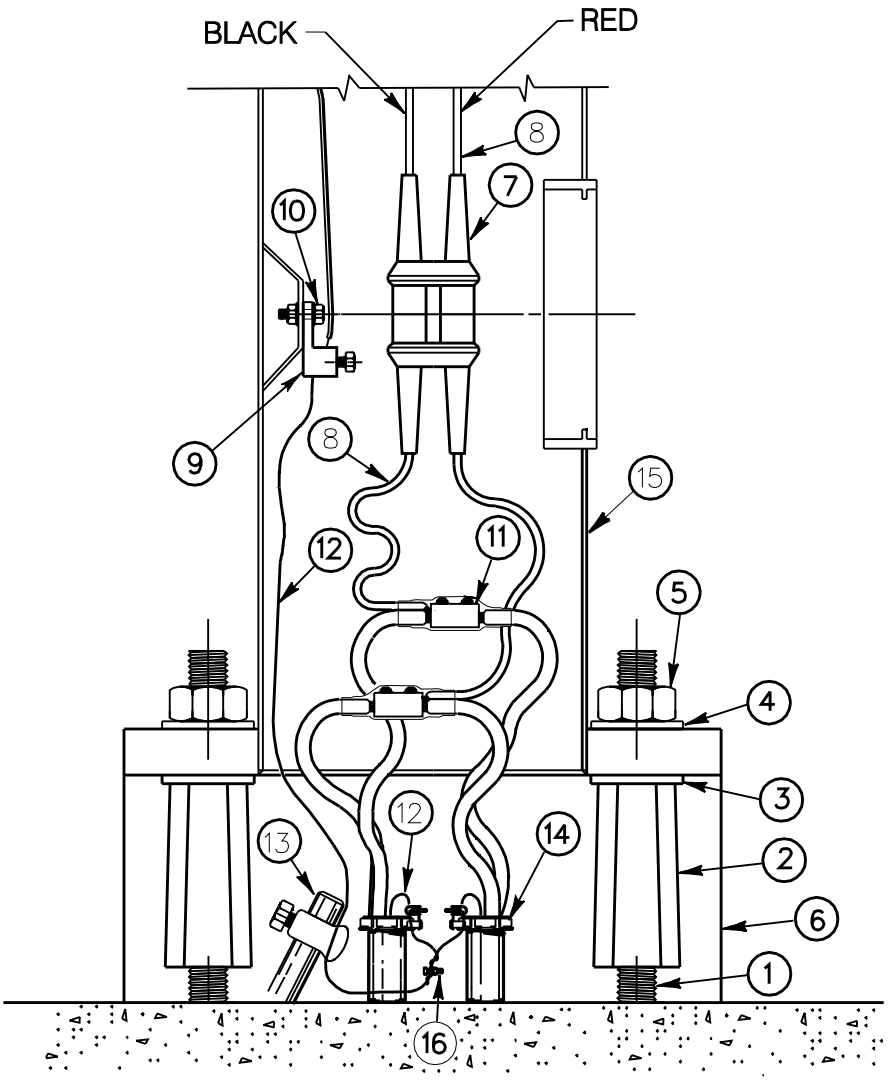
SHEET 1 OF 2



1 – 4 ANCHOR BOLTS
2 – 4 BREAKAWAY SUPPORT COUPLINGS
3 – 4 COUPLING BOTTOM WASHERS
4 – 4 COUPLING TOP WASHERS
5 – 4 HEX NUTS
6 – SKIRT COVER
7 – FUSE BREAKAWAY CONNECTOR (DRW RL508)
8 – #12 AWG CONDUCTORS
9 – LIGHT POLE GROUNDING LUG
10 – STAINLESS STEEL HEX BOLT, NUTS AND WASHERS
11 – SPLICE (DRW RL508)
12 – EQUIPMENT GROUNDING CONDUCTORS
13 – GROUND ROD AND CLAMP
14 – INSULATED THROAT GROUNDING BUSHING
15 – LIGHT POLE
16 – SPLIT BOLT CONNECTOR

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CITY OF SHREVEPORT

BREAKAWAY SUPPORT COUPLING

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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1307–2

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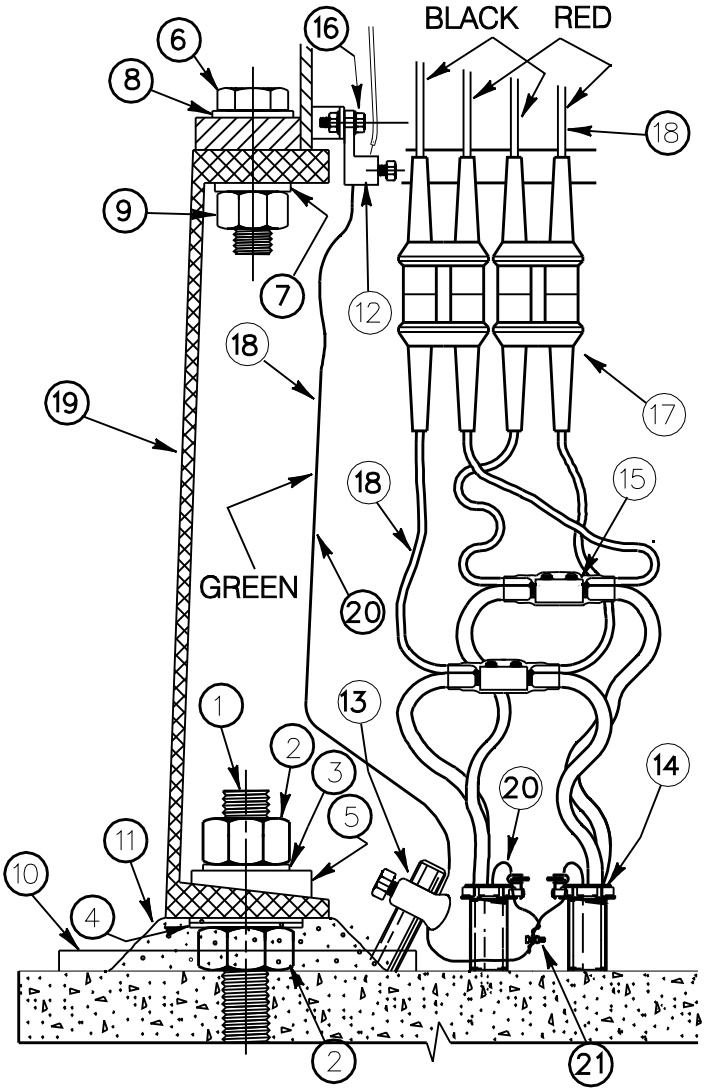

1 – 4 ANCHOR BOLTS
2 – 8 ANCHOR BOLT HEX NUTS
3 – 4 ANCHOR BOLT LOCK WASHERS
4 – 4 ANCHOR BOLT FLAT WASHERS
5 – 4 ANCHOR BOLT HOLD DOWN WASHERS
6 – 4 HEX HEAD BASE BOLTS
7 – 4 BASE BOLT LOCK WASHERS
8 – 4 BASE BOLT FLAT WASHERS
9 – 4 BASE BOLT HEX NUTS
10 – 13MM DIAMETER PLASTIC PIPE
11 – NONSHRINK GROUT
12 – LIGHT POLE GROUNDING LUG
13 – GROUND ROD AND CLAMP
14 – INSULATED THROAT GROUNDING TYPE BUSHING
15 – SPLICE (DRW RL 508)
16 – STAINLESS STEEL HEX BOLT, NUTS AND WASHERS
17 – FUSE BREAKAWAY CONNECTOR (DRW RL508)
18 – #12 AWG CONDUCTORS
19 – BREAKAWAY BASE SHALL CONFORM TO THE 1985 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
20 – EQUIPMENT GROUNDING CONDUCTORS
21 – SPLIT BOLT CONNECTOR

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BREAKAWAY TRANSFORMER BASE AND LIGHT POLE CONNECTIONS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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1307–3

SHEET 1 OF 4

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS : LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, OFFICE OF HIGHWAY, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 1992, EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS : THE STRUCTURAL DESIGN SHALL BE IN ACCORDANCE WITH AASHTO " STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1985, AND MEET THE "AMPLIFICATION FACTOR" METHOD FOR DETERMINING STRESSES.

DESIGN WIND SPEED : 100 MPH.

WELDING : WELDING SHALL CONFORM TO ANSI/AWS DI. I–90 STRUCTURAL WELDING CODE – STEEL. FABRICATOR SHALL NOTIFY LA. DOTD. STRUCTURE/MARINE FABRICATION ENGINEER 10 DAYS PRIOR TO START OF FABRICATION.

HIGH LEVEL LIGHTING TOWER : THE COMPLETE HIGH LEVEL LIGHTING TOWER ASSEMBLY SHALL INCLUDE A TAPERED TUBULAR STEEL SHAFT (WITH AN OCTAGONAL DODECAGONAL, HEXDECAGONAL, ROUND OR OTHER CROSS–SECTIONAL SHAPE AT THE CONTRACTOR'S OPTION). BOTTOM SLEEVE, BASE PLATE, WINCH SUPPORT AND ANCHOR BOLTS COMPLETE, AS SHOWN ON THE PLANS.

A. SHAFT : ASTM A–572 OR ASTM A–595 WITH LIMIT ON MAXIMUM SILICON CONTENT .06% AND WALL THICKNESS FROM 0.171" TO 3/8" INCLUSIVE.
POLE SECTIONS WITH MINIMUM WALL THICKNESS OF 5/16" OR MORE MAY BE FABRICATED WITH TWO (2) PLIES TIGHTLY FITTED TOGETHER TO FORM DESIRED WALL THICKNESS. DESIGN AND DETAILS SHALL BE SUBMITTED FOR APPROVAL TO THE BRIDGE DESIGN ENGINEER.

1. SHAFT DIMENSIONS AND TOLERANCES SHALL CONFORM TO ASTM A–500, A–501 AND A–595.
2. THE CONTRACTOR SHALL CHECK THE POLE FOR STRAIGHTNESS AFTER ASSEMBLY BUT BEFORE ERECTION AND MAKE ADJUSTMENTS TO CONFORM WITH NOTE "A.I" FOR THE ASSEMBLED POLE.
3. HANDHOLE SIZE SHALL BE AS REQUIREDFOR LOWERING DEVICE. SECTION AT HANDHOLE TO BE REINFORCED TO HAVE EQUIVALENT SECTION MODULUS AS THE SECTION WITHOUT THE HOLE. HANDHOLE COVER IS TO BE HINGED WITH PROVISION FOR LOCKING.
4. SHAFT SHALL HAVE NOT MORE THAN TWO (2) LONGITUDINAL SEAM BUTT WELDS WITH 60% MINIMUM PENETRATION AND GROUND SMOOTH. FULL PENETRATION OF THE LONGITUDINAL SEAM WELD IS REQUIRED FOR BOTH SECTIONS WITHIN 6" OF ANY HORIZONTAL SPLICE LIMITS. HORIZONTAL SPLICE MAY BE EITHER A FRICTION SPLICE WITH MINIMUM OVERLAP LENGTH OF 1–1/2 x INSIDE DIAMETER OF FEMALE END OF SHAFT SECTION OR CIRCUMFERENTIAL BUTT WELDED SPLICE WITH FULL PENETRATION AND GROUND SMOOTH. FRICTION TYPE : I SHALL HAVE A 1/2 " DIA. HOLE LOCATED ON THE FEMALE END AT THE MINIMUM OVERLAP LENGTH FOR A PERMANENT RECORD OF THE LAP , AND 2) SHOULD BE SHOP ASSEMBLED BEFORE GALVANIZING TO ENSURE PROPER FIELD ERECTION.

B. BOTTOM SLEEVE : ASTM A–572 OR ASTM A–595 WIYH 3/8 " WALL THICKNESS.

C. BASE PLATE : ASTM A–441 OR ASTM A–572

D. WINCH SUPPORT : ASTM A–36 (OR APPROVAL EQUAL) . METHOD TO SUPPORT WINCH MAY VARY FROM THAT SHOWN, SUBJECT TO THE APPROVAL OF THE BRIDGE DESIGN ENGINEER.

E. ANCHOR BOLTS : ASTM A–687, ASTM A–193–B7, OR AASHTO M314–GR 105 HAVING A MINIMUM YIELD STRESS OF 105,000 PSI. AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A–153 FOR THE ENTIRE LENGTH. NUT SHALL CONFORM TO ASTM A194 GRADE 2H HEAVY HEX AND FLAT WASHERS TO ASTM F–436. ANCHOR BOLTS SHALL BE FURNISHED IN A PREPOSITIONED ANCHOR BOLT ASSEMBLY.

HOT DIP GALVANIZING : AFTER FABRICATION, ALL SURFACES OF THE POLE AND COMPONENT PARTS OF THE HIGH LEVEL LIGHTING TOWER SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A–123. EACH SECTION SHALL BE COMPLETELY IMMERSED IN ONE (1) PASS. DOUBLE DIPPING WILL NOT BE PERMITTED.

LUMINAIRE BRACKET AND ASSEMBLY : THE POLE MANUFACTURER SHALL FURNISH A COMPLETE AND COMPATIBLE LUMINAIRE BRACKET ASSEMBLY SUITABLE FOR MOUNTING REQUIRED SYMMETRICALLY SPACED LUMINAIRES. LOWERING ASSEMBLY MOUNTED ON HIGH MAST LIGHTING TOWER SHALL BE APPROVED BY THE BRIDGE DESIGN ENGINEER. (SEE SPECIAL PROVISIONS).

REINFORCING STEEL : SIZE #7 AND LARGER SHALL BE GRADE 60. UNLESS OTHERWISE NOTED, ALL BARS SMALLER THAN #7 MAY BE GRADE 40 OR 60 AT CONTRACTORS OPTION.

LIGHTING TOWER FOUNDATION : FOUNDATIONS FOR THE TOWERS SHALL BE EITHER DRILLED SHAFTS OR PILE FOOTINGS (USING EITHER CONCRETE PILES OR TREATED TIMBER PILES). CONSTRUCT FOUNDATION TO SECTION 814 OR OTHER APPLICABLE PART VIII SECTIONS FROM THE STANDARD SPECIFICATIONS. CONTRACTOR SHOULD NOTED THAT IF STEEL CASING OR SLURRY IS REQUIRED FOR DRILL SHAFTS OR EXCAVATION BRACING FOR PILE FOOTING, IT WILL BE AT NO ADDITIONAL COST TO DOTD.

SOIL ASSUMPTIONS : $q_u \geq .5$ TSF FOR TOP 25' THICK STATA. > 1.0 TSF FOR STATA BELOW.

DESIGN LIMITS : DEFL ≤ Ø50: F.S. = 2.0

CITY OF SHREVEPORT

HIGH MAST POLE

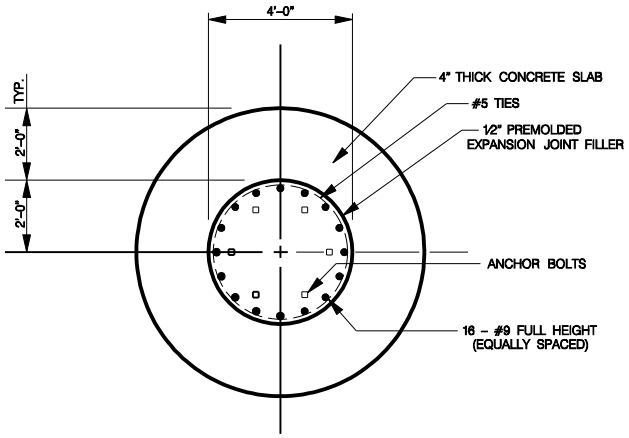
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

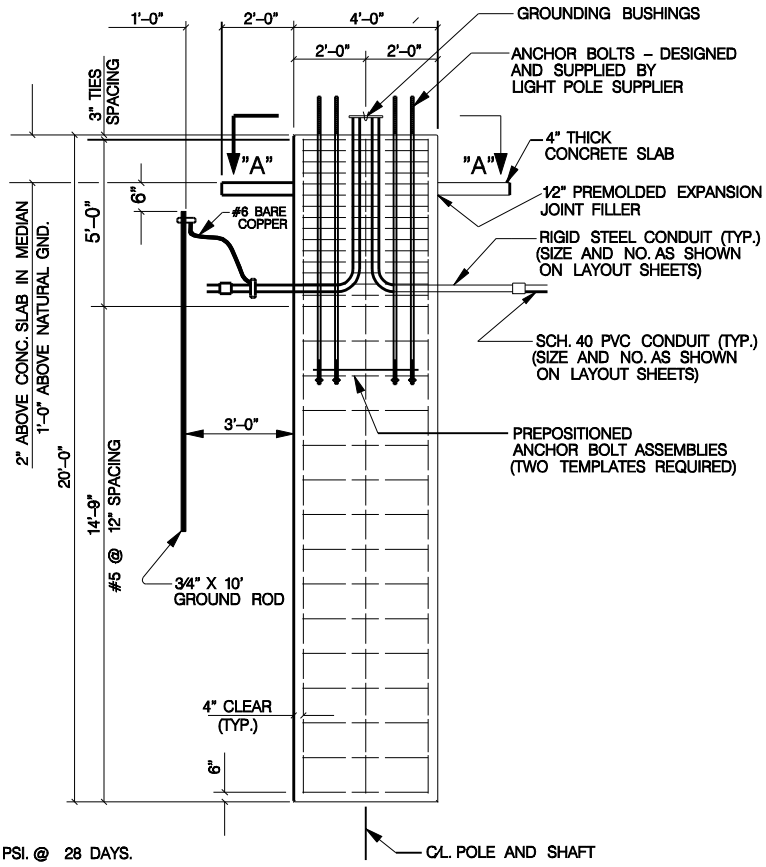
STANDARD PLAN

1307–4

SHEET 2 OF 4



SECTION "A – A"



NOTES :

1. ALL CONCRETE SHALL BE 4000 PSI. @ 28 DAYS.
2. ALL REBARS SHALL BE GRADE 60.
3. EITHER PROVIDE FULL HEIGHT TEMPORARY STEEL CASING FOR EACH SHAFT OR INSTALL SHAFTS USING APPROPRIATE SLURRY METHOD AS REQUIRED.

DRILLED SHAFT FOOTING

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

HIGH MAST POLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED:

STANDARD PLAN

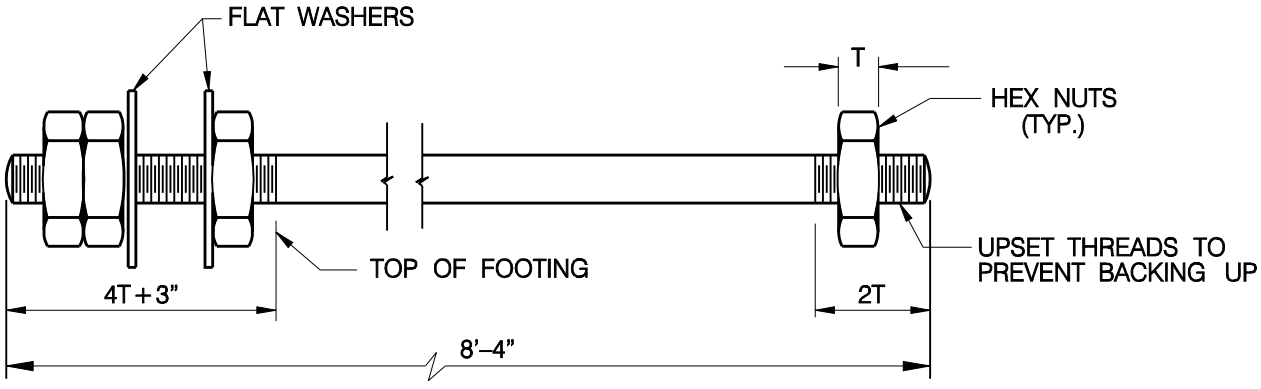
1307–5

SHEET 3 OF 4

ESTIMATED QUANTITIES PAID FOR UNDER ITEM 730(06)				
DRILLED SHAFT	A	B	C	D
Ø (FEET)	4			
LENGTH (FEET)	20			
REINF. STEEL (LB.)	1389			
CLASS "A" CONCRETE (C.Y.)	9.3			

* UPPER 2.5' OF SIDES ROUGHENED TO 1/4" AMPLITUDE

LUMINAIRE LOADS		
NO. OF LUMINAIRES	E.P.A. OF LUMINAIRES & LOWERING DEVICE	WT. OF LUMINAIRES & LOWERING DEVICE
6	20 SQUARE FEET	800 POUNDS
8	25 SQUARE FEET	900 POUNDS
12	35 SQUARE FEET	1000 POUNDS



ANCHOR BOLTS

CITY OF SHREVEPORT

HIGH MAST POLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

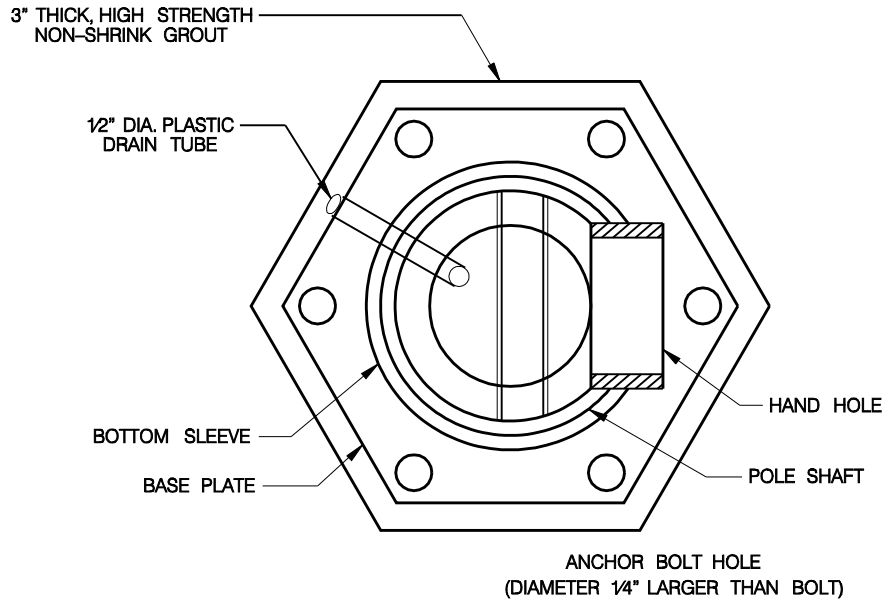
APPROVED: REW

REVISED: _____

STANDARD PLAN

1307–6

SHEET 4 OF 4



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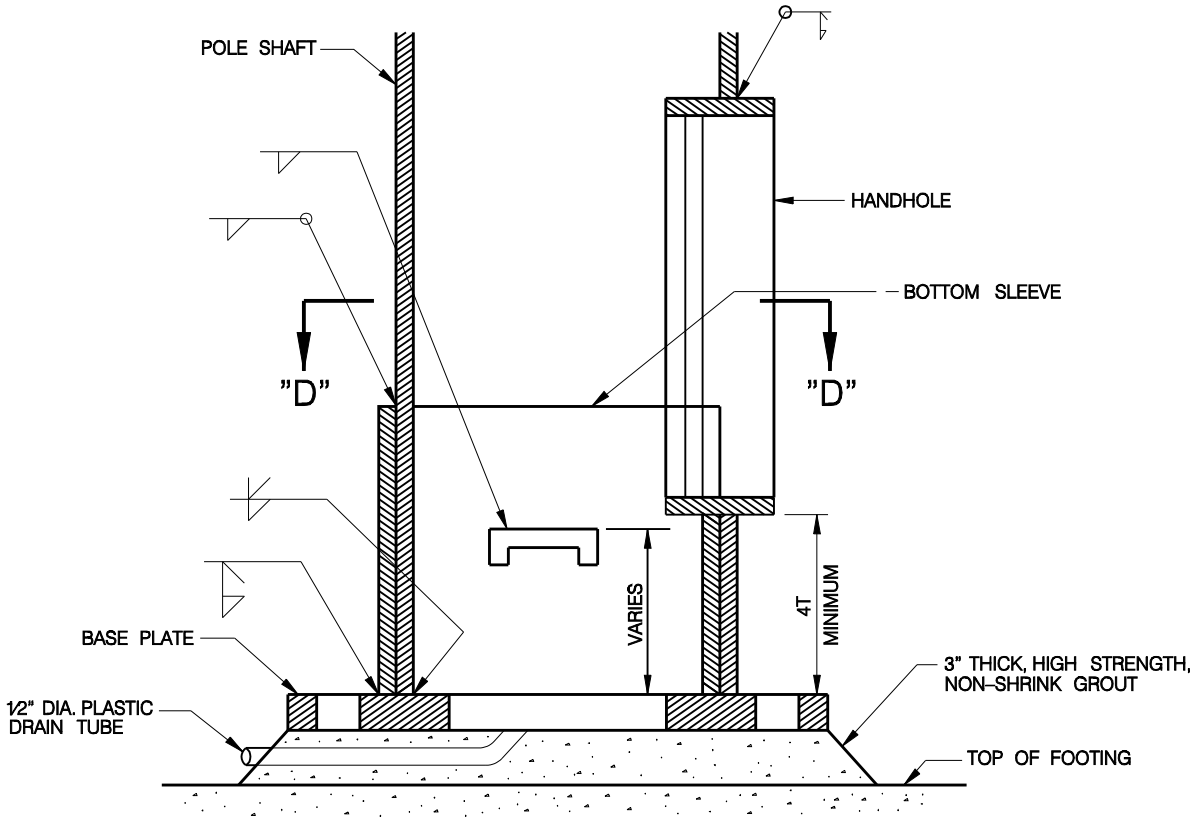


TYPICAL SECTION AT POLE BASE

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

HIGH MAST POLE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

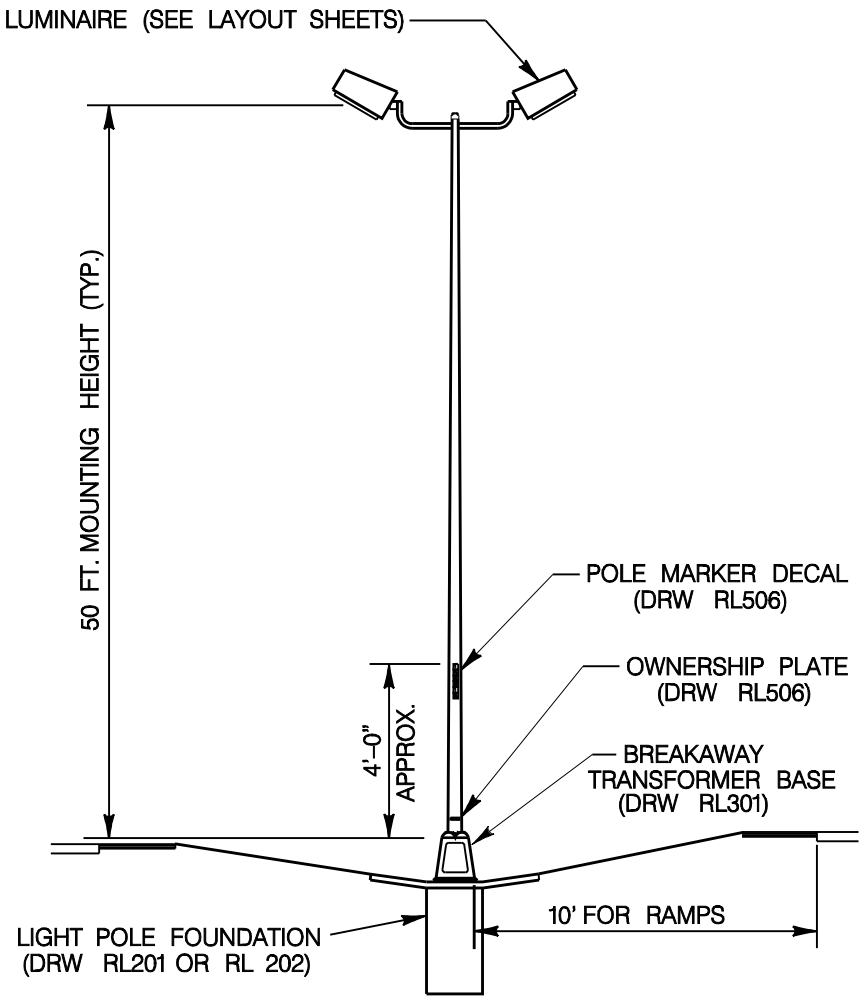
APPROVED: REW

REVISED: _____

STANDARD PLAN

1307–7

SHEET 1 OF 2



POLE AND HARDWARE SHALL CONFORM TO AASHTO–AGC–ARTBA PUBLICATION "A GUIDE TO STANDARDIZED HIGHWAY LIGHTING POLE HARDWARE", (ARTBA TECHNICAL BULLETIN NO.270) EXCEPT AS NOTED.

DESIGN SHALL BE FOR 90 MPH WIND ZONES. POLE SHALL BE ALUMINUM OR GALVANIZED STEEL AND SHALL BE EQUIPPED WITH A BREAKAWAY TRANSFORMER BASE (DRW RL301).

THREE (3) AWG NO. 12 CONDUCTORS COLORED BLACK, RED, AND GREEN, SHALL BE INSTALLED FROM EACH LUMINAIRE TO BREAKAWAY CONNECTORS (DRW RL507) AND GROUND LUG IN BASE.

AVOID PLACING POLES BETWEEN 2' AND 12' FROM EDGE OF SHOULDER ON MAIN ROADS THAT HAVE SIDE SLOPES OF 4:1 OR GREATER.

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

LIGHT POLE INSTALLATION
(SIDE GROUND MOUNTING)

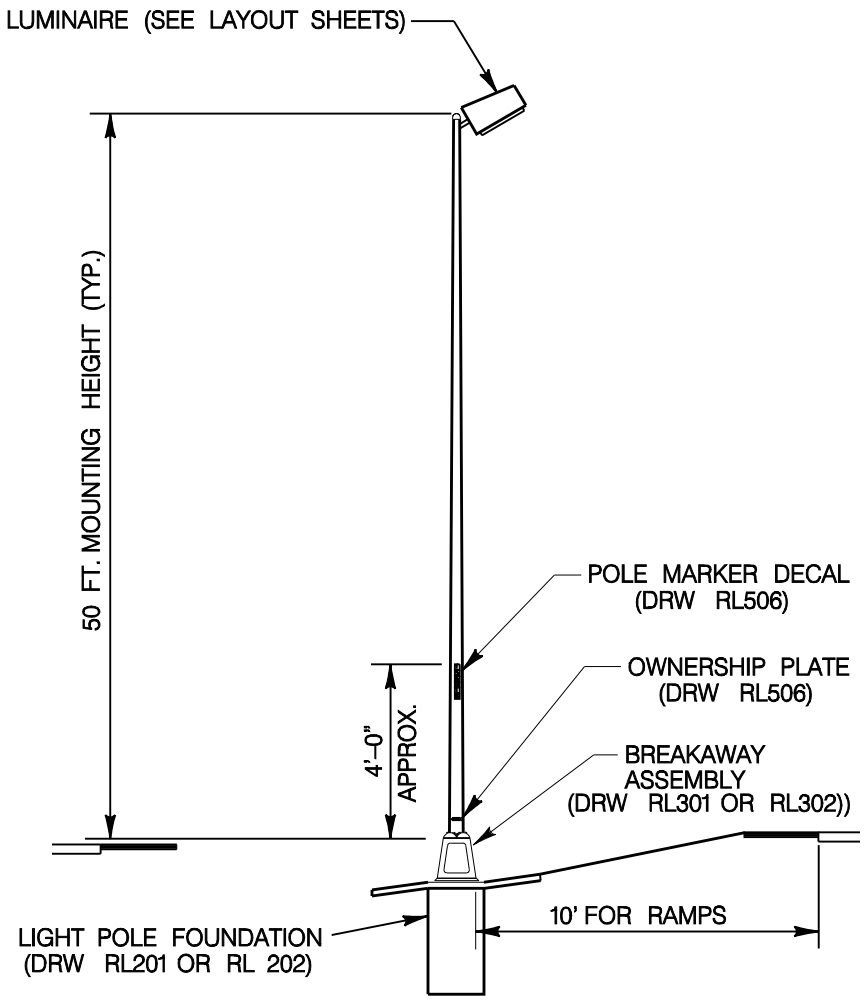
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: _____
APPROVED: REW
REVISED: _____

STANDARD PLAN

1307–8

SHEET 2 OF 2



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- DESIGN SHALL BE FOR 90 MPH WIND ZONES, POLE SHALL BE ALUMINUM OR GALVANIZED STEEL AND SHALL BE EQUIPPED WITH A BREAKAWAY ASSEMBLY.
- THREE (3) AWG NO. 12 CONDUCTORS COLORED BLACK, RED, AND GREEN. SHALL BE INSTALLED FROM EACH LUMINAIRE TO BREAKAWAY CONECTORS (DRW RL507) AND GROUND LUG IN BASE.
- LOCATE LIGHT STANDARD ON CENTER LINE OF MEDIAN OR AS DIRECTED BY THE PROJECT ENGINEER.
- AVOID PLACING POLES BETWEEN 2' AND 12' FROM EDGE OF SHOULDER ON MAIN ROADS THAT HAVE SIDE SLOPES OF 4:1 OR GREATER.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

LIGHT POLE INSTALLATION
(SIDE GROUND MOUNTING)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

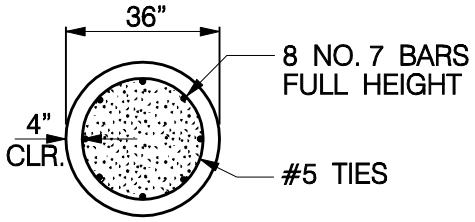
DRAWN: Nhan Tran
CHECKED: _____
APPROVED: REW
REVISED: _____

STANDARD PLAN

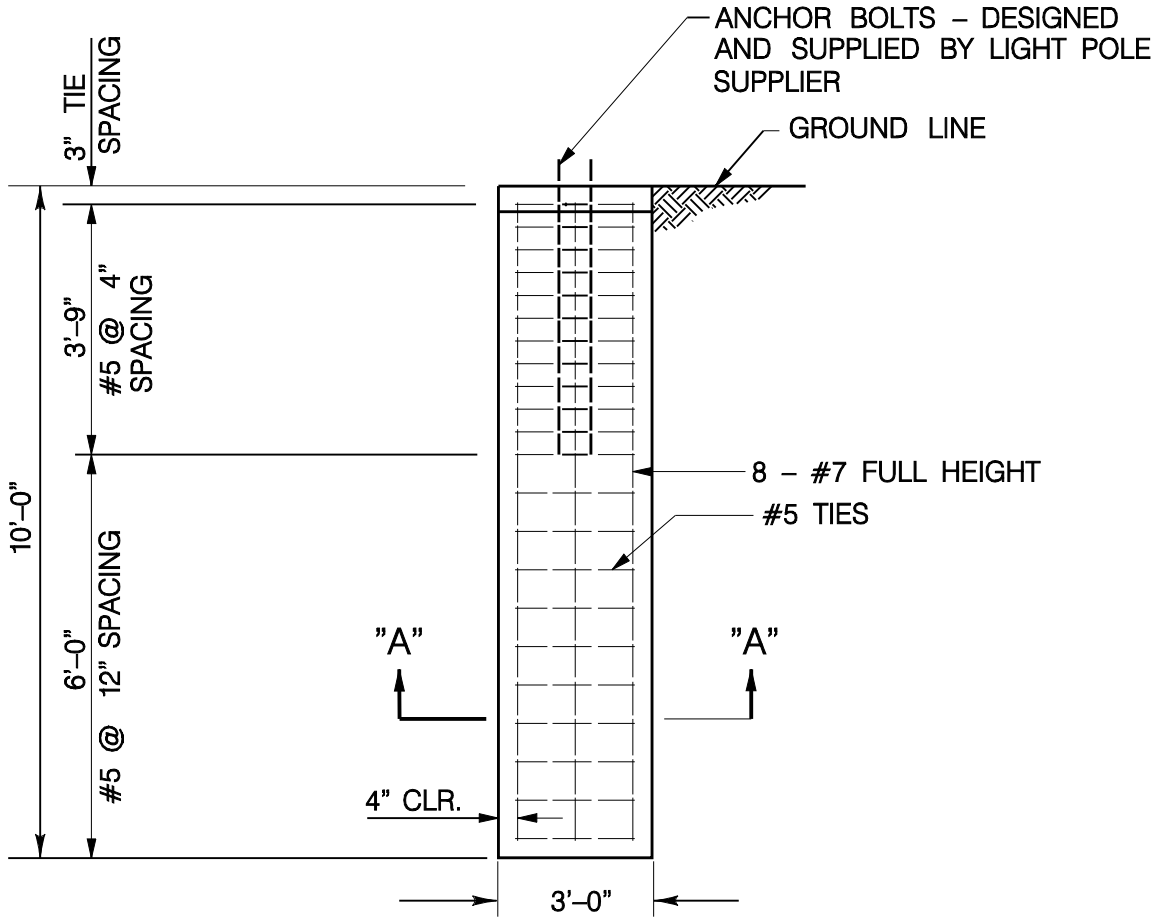
1307–9

SHEET 1 OF 2

ESTIMATED QUANTITIES PAID FOR UNDER ITEM 730(06)	
DRILLED SHAFT	
Ø (FEET)	3
LENGTH (FEET)	10
REIF. STEEL (LBS.)	294
CLASS "A" CONCRETE (C.Y.)	2.7



SECTION A–A



ELEVATION OF FOOTING (50' DOTD. LIGHT POLE)

CITY OF SHREVEPORT

LIGHT POLE FOUNDATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

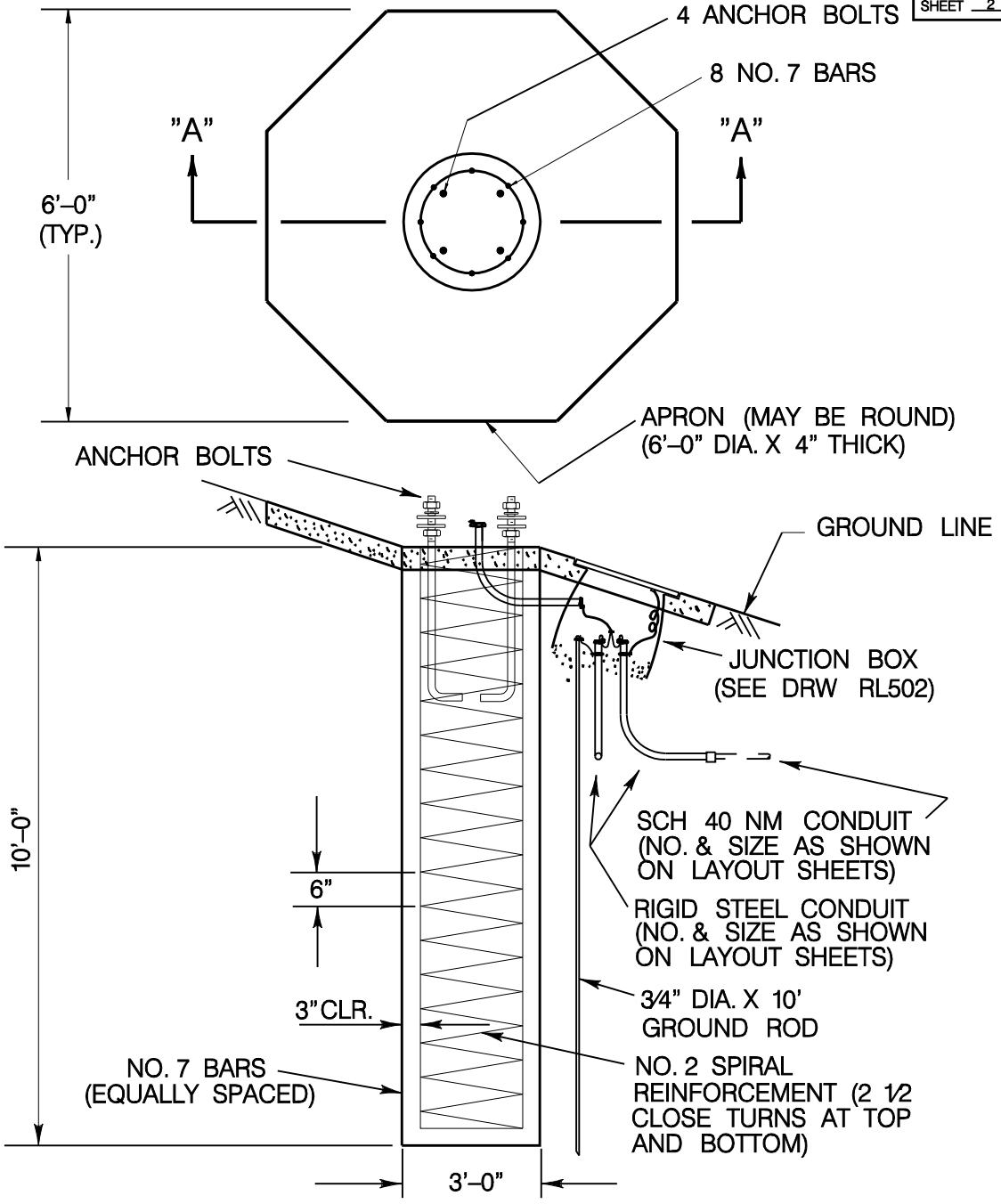
APPROVED: REW

REVISED: _____

STANDARD PLAN

1307–10

SHEET 2 OF 2



SECTION A–A

LIGHT POLE FOUNDATION
(WITH JUNCTION BOX IN APRON)

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

LIGHT POLE FOUNDATION

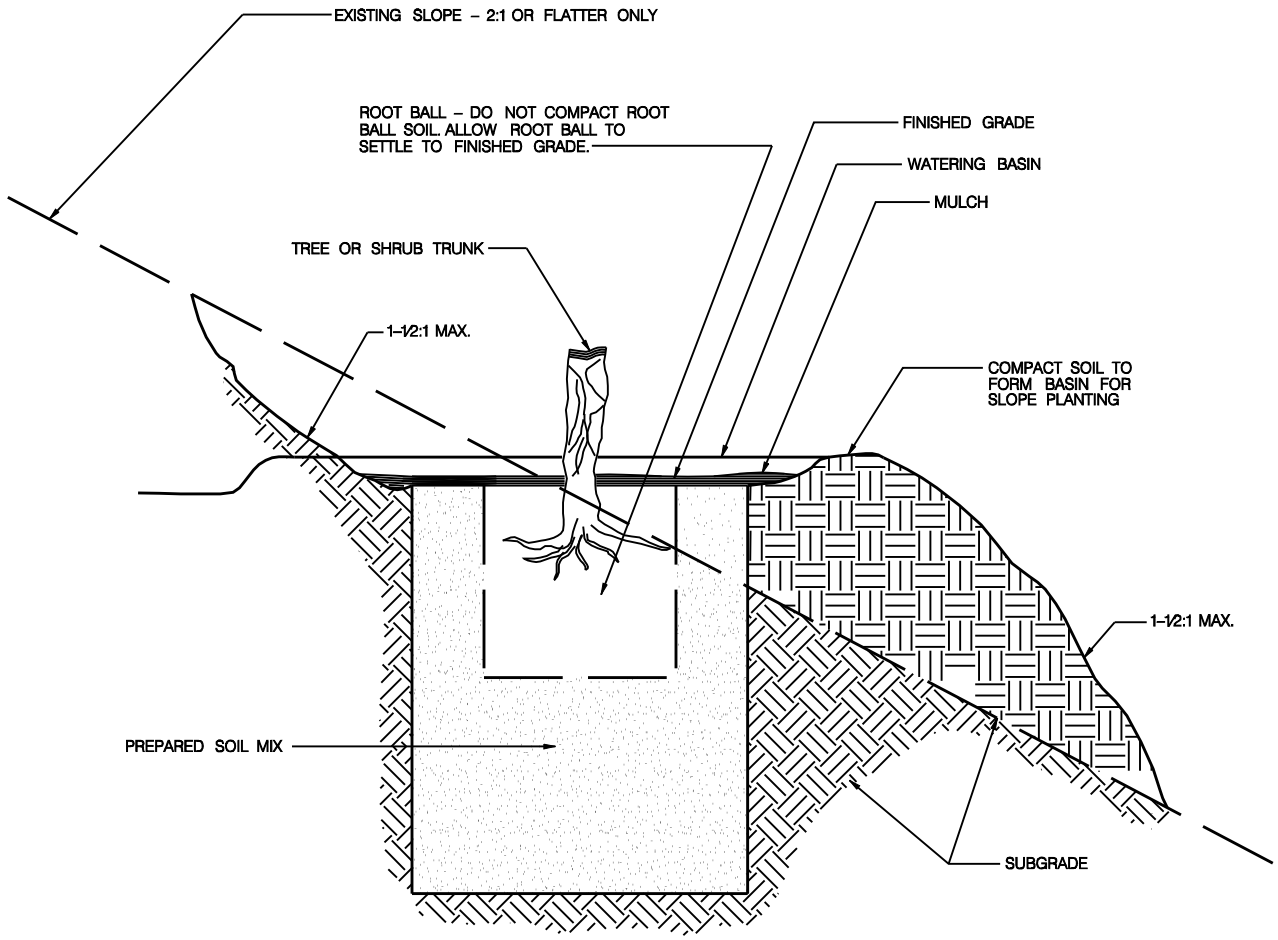
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: _____
APPROVED: REW
REVISED: _____

STANDARD PLAN

1201–1

SHEET 1 OF 1



CITY OF SHREVEPORT

SHRUB AND TREE PLANTING

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

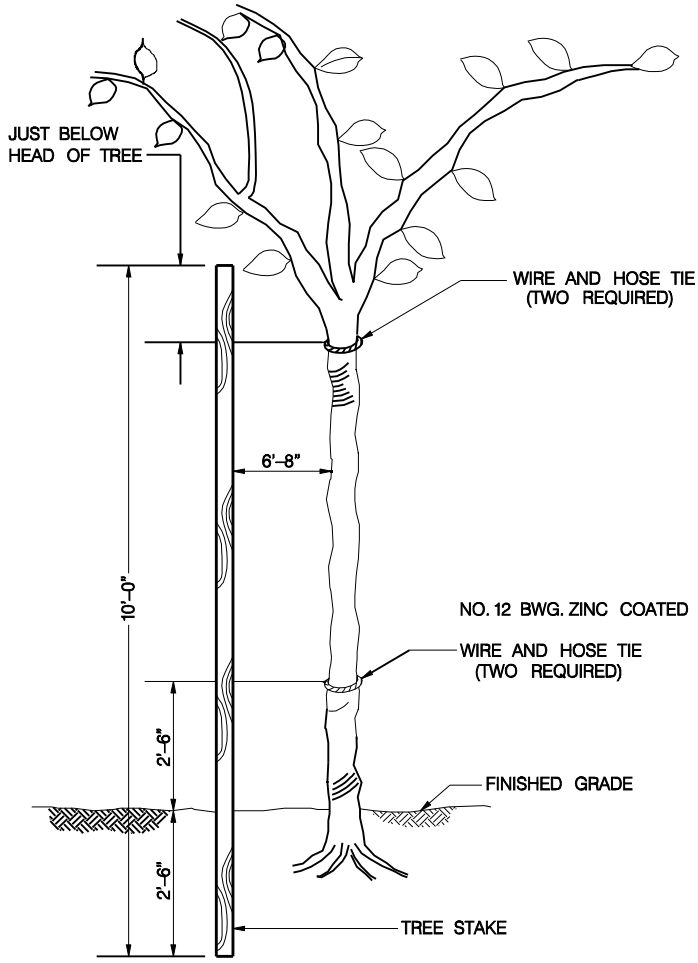
APPROVED: REW

REVISED:

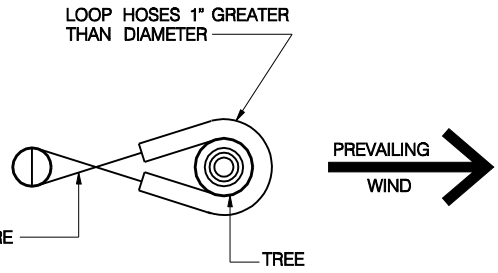
STANDARD PLAN

1201–2

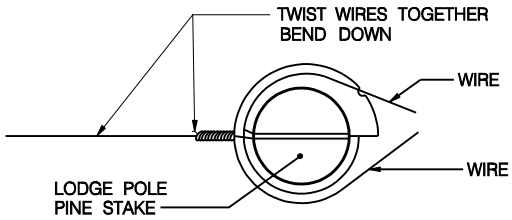
SHEET 1 OF 3



ELEVATION



PLAN VIEW



DETAIL

NOTES :

1. EACH WIRE SHALL BE WRAPPED TIGHTLY AROUND AND THROUGH LODGE POLE (IN OPPOSITE DIRECTIONS) PRIOR TO BEING TWISTED TOGETHER. BEND TWISTED WIRE DOWNWARD.
2. TREE STAKES :
   CASE 1 : 1–1/2" DIAMETER, SCHEDULE 40, GALVANIZED STEEL PIPE STAKE
   CASE 2 : 2" DIAMETER LODGE POLE PINE TREATED WITH COPPER NANTHANATE.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TREE STAKING

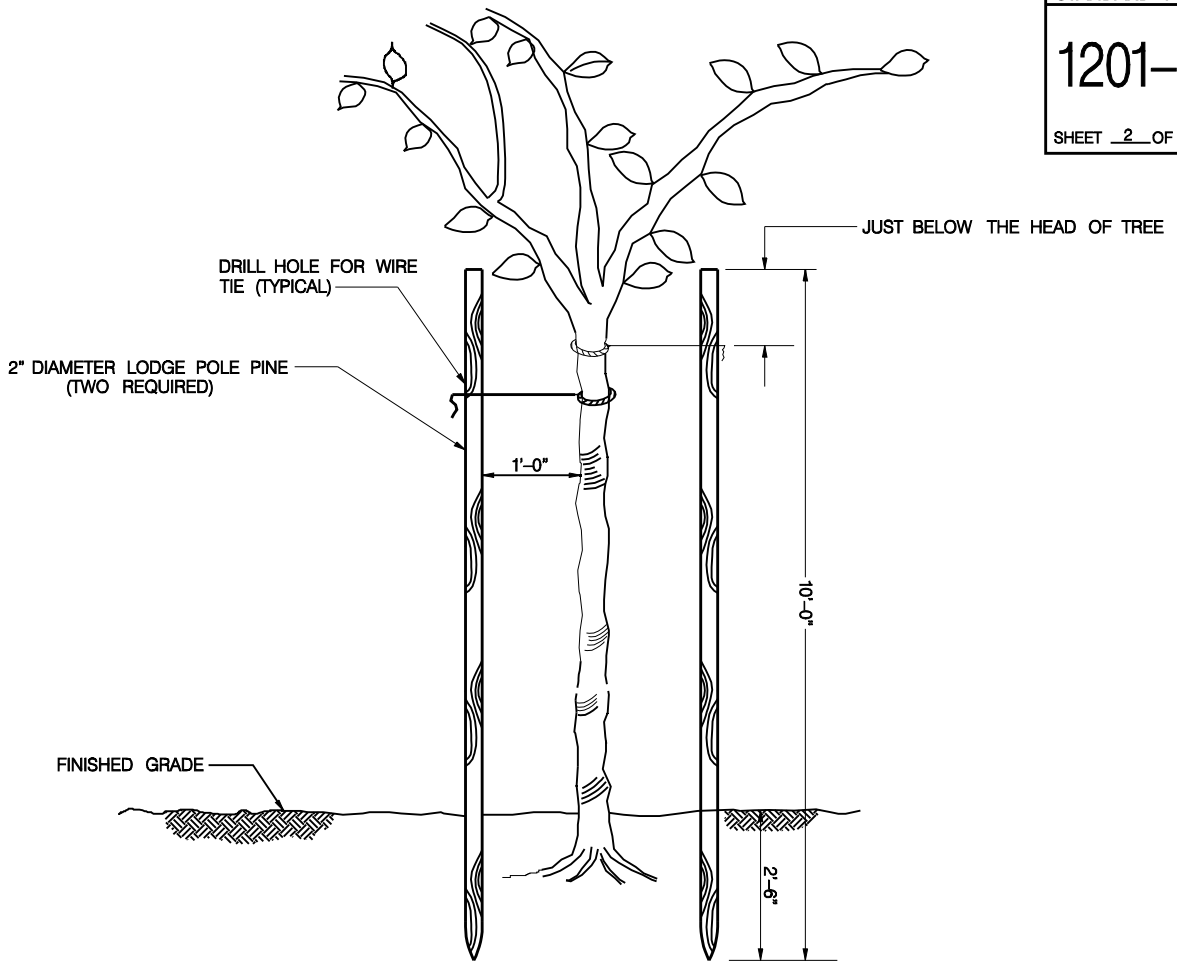
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

1201–3

SHEET 2 OF 3



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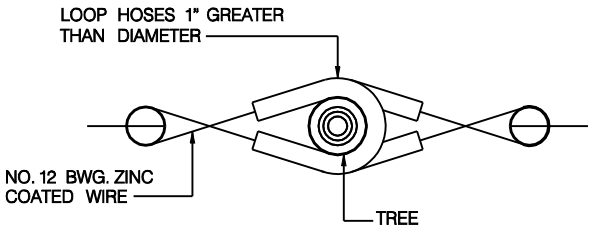
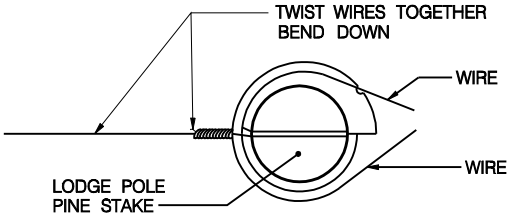


PLAN VIEW



DETAIL

NOTES :

1. EACH WIRE SHALL BE WRAPPED TIGHTLY AROUND AND THROUGH LODGE POLE (IN OPPOSITE DIRECTIONS) PRIOR TO BEING TWISTED TOGETHER. BEND TWISTED WIRE DOWNWARD.
2. TREE STAKES :
   - CASE 1 : 1–1/2" DIAMETER, SCHEDULE 40, GALVANIZED STEEL PIPE STAKE
   - CASE 2 : 2" DIAMETER LODGE POLE PINE TREATED WITH COPPER NANTHANATE.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TREE STAKING

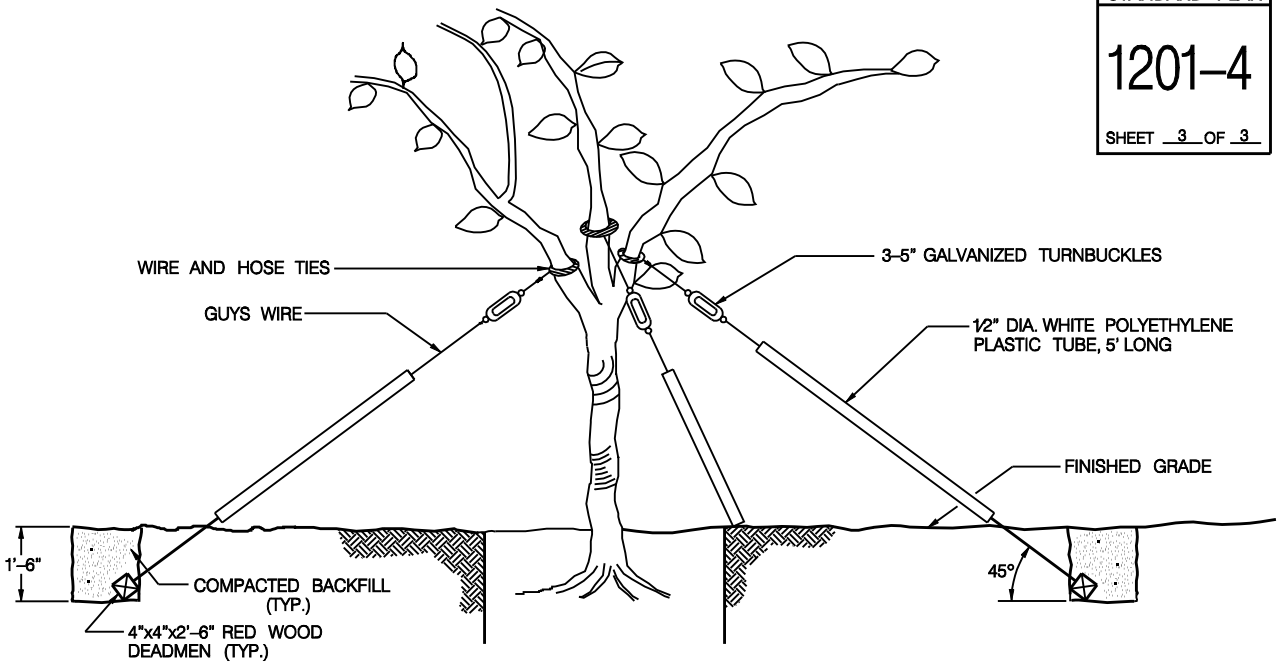
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

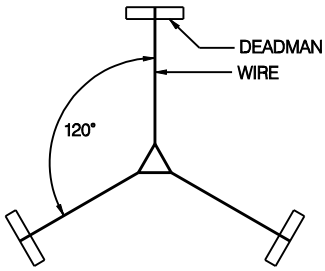
STANDARD PLAN

1201–4

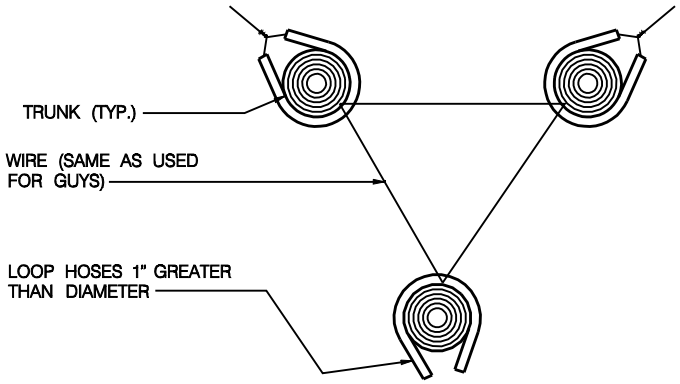
SHEET 3 OF 3



ELEVATION

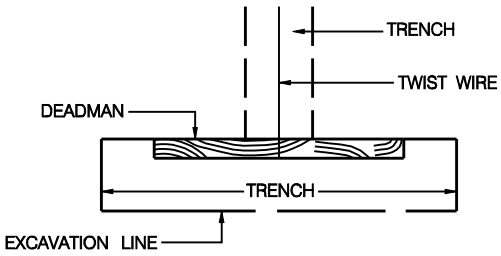


PLAN
DEADMAN PLACEMENT



TYING PLAN

INSTALL WIRE TIES BETWEEN INDIVIDUAL GUYS PRIOR TO TENSIONING GUYS.



PLAN
DEADMAN

GUYS WIRE SIZES

24" – 36" BOX	1 STRAND # 12 BWG. ZINC COATED
36" – 48" BOX	2 STRAND # 12 BWG. ZINC COATED
OVER 48"	3 STRAND # 12 BWG. ZINC COATED

MULTIPLE STRANDS SHALL BE TWISTED TOGETHER

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TREE STAKING

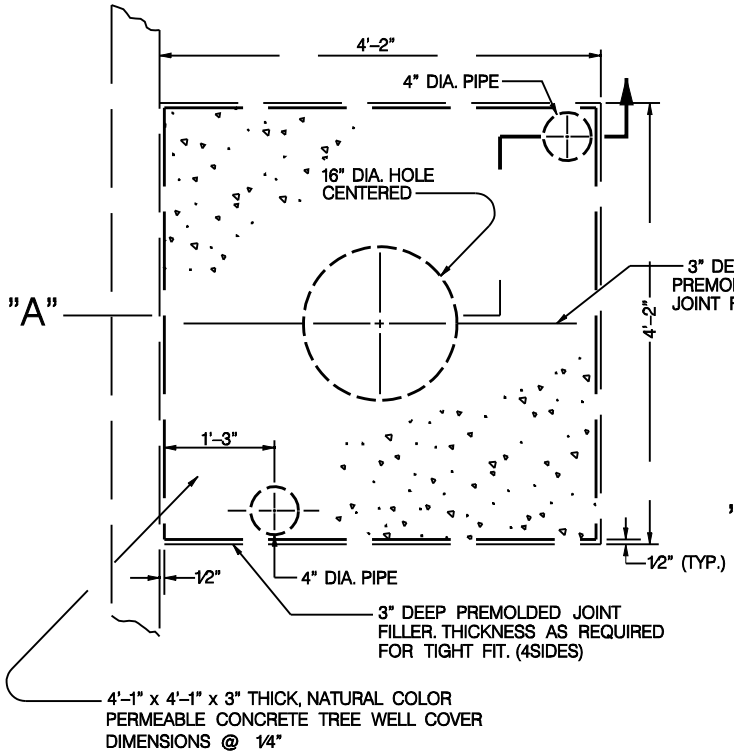
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

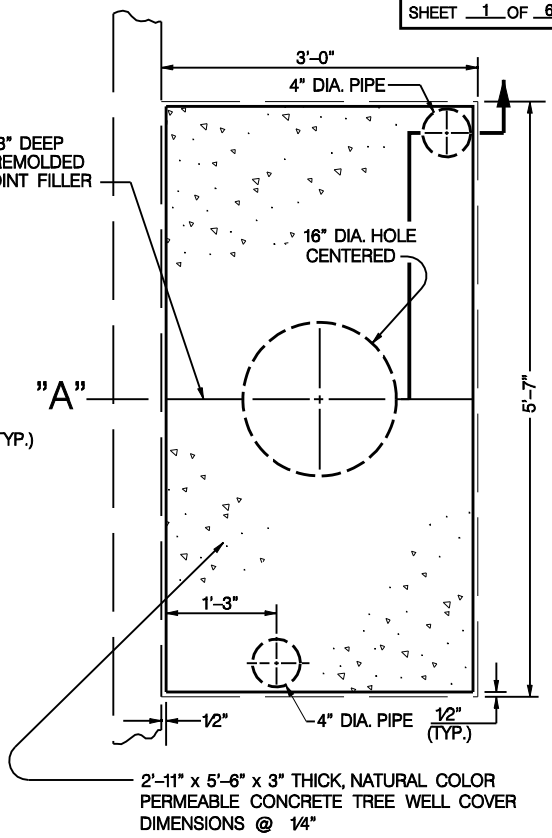
STANDARD PLAN

1201–5

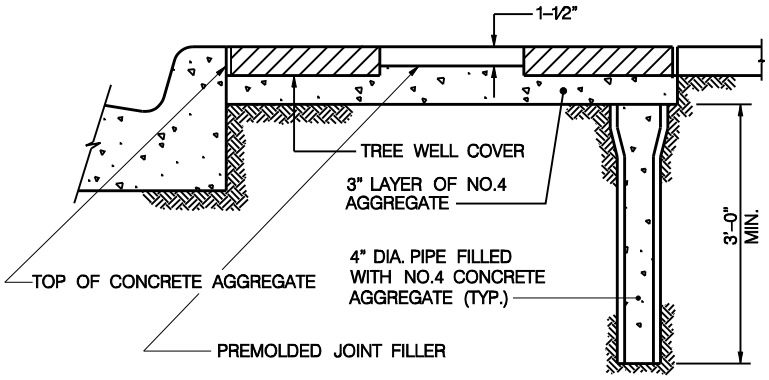
SHEET 1 OF 6



CASE 1



CASE 2



SECTION "A"

TYPE 1

NOTE :
SEE SHEET 4 FOR NOTES PERTAINING TO THIS SHEET.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TREE WELL

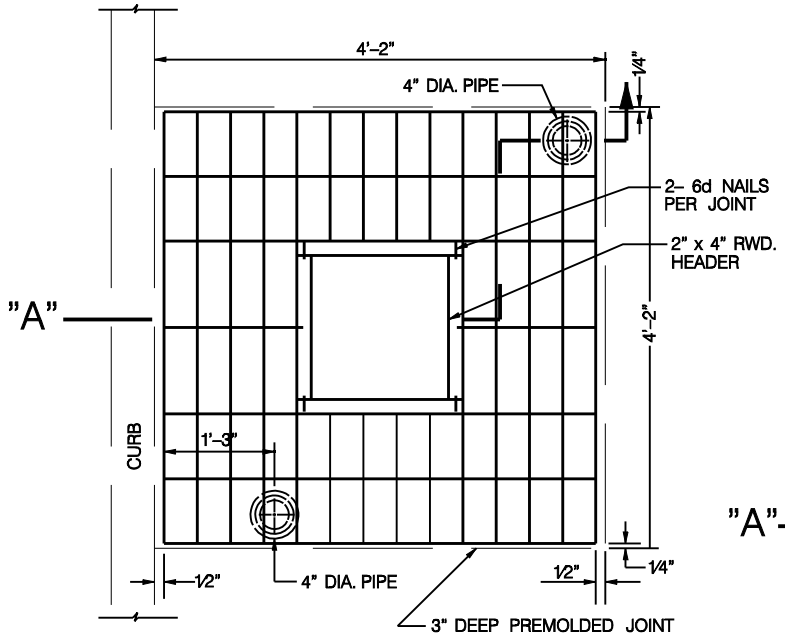
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

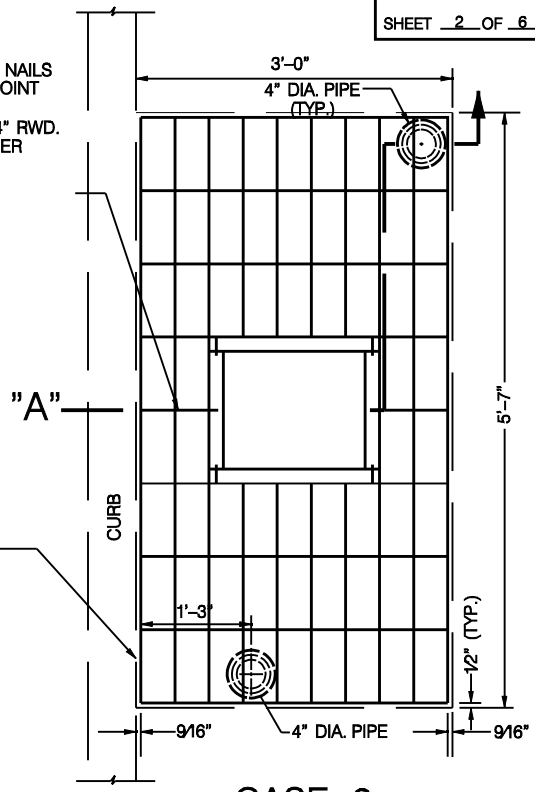
STANDARD PLAN

1201–6

SHEET 2 OF 6



CASE 1



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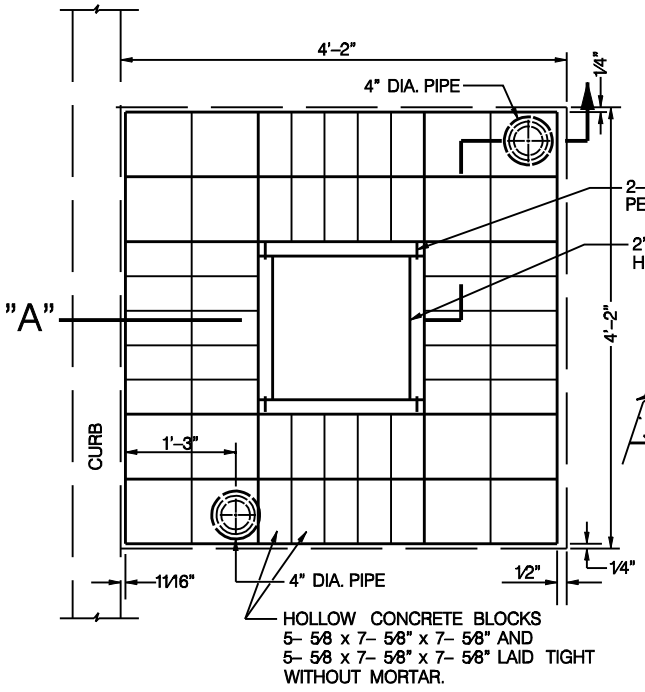
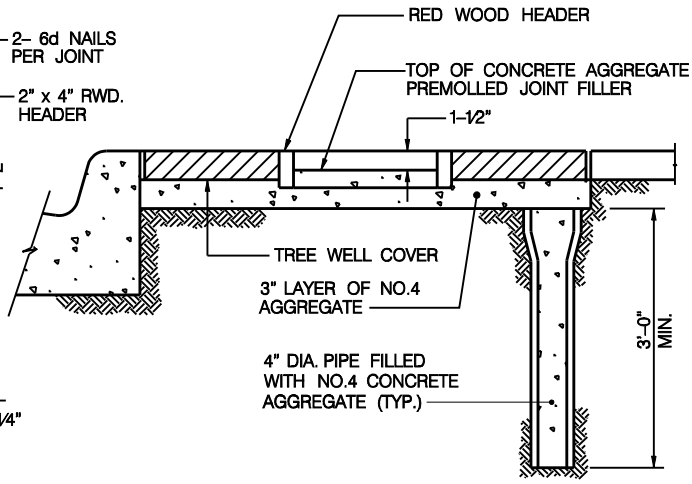


CASE 3



SECTION "A"

TYPE 2

NOTE :

SEE SHEET 4 FOR NOTES PERTAINING TO THIS SHEET.

CITY OF SHREVEPORT

TREE WELL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED:

STANDARD PLAN

1201–7

SHEET 3 OF 6

GENERAL NOTES

NOTES FOR TYPE 1 TREE WELL

1. THE COVER SHALL BE MADE OF PERMEABLE CONCRETE WITH A MINIMUM COMPRESSIVE SRENGTH OF 1200 PSI. AND SHALL BE CAST–IN–PLACE OR PRECAST "AGRIPERM" OR EQUIVALENT. CAST–IN–PLACE CONCRETE SHALL CONSIST OF ONE PART CEMENT TO FOUR PARTS 3⁄8" GRAVEL AND APPROXIMATELY FOUR GALLONS OF WATER PER SACK OF CEMENT. THE GRAVEL SHALL BE CLEAN WITH FINES REMOVED. THE CONCRETE MIXTURE SHALL BE DEPOSITED AS NEAR AS POSSIBLE TO ITS FINAL LOCATION. THE EXCESS CONCRETE SHALL BE RODDED OFF IN A SAWING MOTION . A SURPLUS OF CONCRETE SHOULD BE MAINTAINED AGAIN THE FRONT SURFACE OF THE CREED IN ORDER THAT LOW AREAS WILL BE FILLED AS THE SCREED PASSES OVER. RODDING SHALL BE HELD TO A MINIMUM. AFTER THE SURFACE IS FLAT NO OTHER FINISHING WILL BE REQUIRED. CURING COMPOUND TO WHICH WATER PROOFING MATERIALS HAVE BEEN ADDED WILL NOT BE PERMITTED.
2. EXISTING SIDEWALK SHALL BE CAREFULLY SAWCUT PREPARATORY TO INSTALLATION OF TREE WELL COVERS. SAWCUT OVER–RUNS SHALL BE CLEANED AND FILLED WITH EPOXY APPROVED BY THE ENGINEER AND FINISHED TO SIDEWALK GRADE.
3. THE PIPE MAY BE CIP, ACP, VCP, ABS, PVC, GALV. STL. OR ASPHALT IMPREGNATED FIBER DUCT AND IT MAY BE BELL OR PLAIN END.
4. AFTER ALL OTHER WORK PERTINENT TO PLANTING HAS BEEN COMPLETED, EACH TREE SHALL BE WATERED IMMEDIATELY WITH A MINIMUM OF 20 GALLONS OF WATER , AND REPEATED 2 TIMES IN THE NEXT 3 DAYS. AFTER THE TREE HAS BEEN WATERED AND THE SOIL IS SUFFICIENTLY DRY. THE SOIL SHALL BE GRADED AND TAMPED . THE 3– INCH LAYER OF AGGREGATE SHALL BE PLACED AND GRADED TO ACCEPT THE TREE WELL COVER FIRMLY, WITHOUT ROCKING, AND FLUSH WITH THE TOP SURFACE OF THE SIDEWALK. THE PREMOLDED JOINT FILLER SHALL BE CAREFULLY PLACED TO INSURE A TIGHT FIT WITH THE TOP OF THE JOINT FILLER FLUSH WITH THE ADJACENT SIDEWALK.
5. IF CAST–IN–PLACE, THERE SHALL BE A 3 MIL PLASTIC LINER BETWEEN WALK AND AGGREGATE.

NOTES FOR TYPE 2 TREE WELL

1. EXISTING SIDEWALK SHALL BE CAREFULLY SAWCUT PREPARATORY TO LAYING OF CONCRETE BLOCK OR BRICK. SAWCUT OVER RUNS SHALL BE CLEANED AND FILLED WITH EPOXY APPROVED BY THE ENGINEER AND FINISHED TO SIDEWALK GRADE.
2. THE PIPE MAY BE CIP, ACP, VCP, ABS, PVC, GALV. STL. ORASPHALT IMPREGNATED FIBER DUCT, AND IT MAY BE BELL OR PLAIN END.
3. NAILS SHALL BE GALVANIZED STEEL BOX.
4. AFTER ALL OTHER WORK PERTINENT TO PLANTING HAS BEEN COMPLETED, EACH TREE SHALL BE WATERED IMMEDIATELY WITH A MINIMUM OF 20 GALLONS OF WATER AND REPEATED 2 TIMES IN THE NEXT 3 DAYS. AFTER THE WATER HAS SETTLED AND THE SOIL IS SUFFICIENTLY DRY, THE SOIL SHALL BE GRADED AND TAMPED. A 3– INCH LAYER OF AGGREGATE SHALL BE PLACED TO ACCEPT BRICKS FLUSH WITH THE TOP SURFACE OF THE SIDEWALK. THE PREMOLDED JOINT FILLER AND HEADERS SHALL BE CAREFULLY PLACED TO INSURE A TIGHT FIT WITH THE TOP OF THE JOINT FILLER FLUSH WITH THE ADJACENT SIDEWALK.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES DOS

CITY OF SHREVEPORT

TREE WELL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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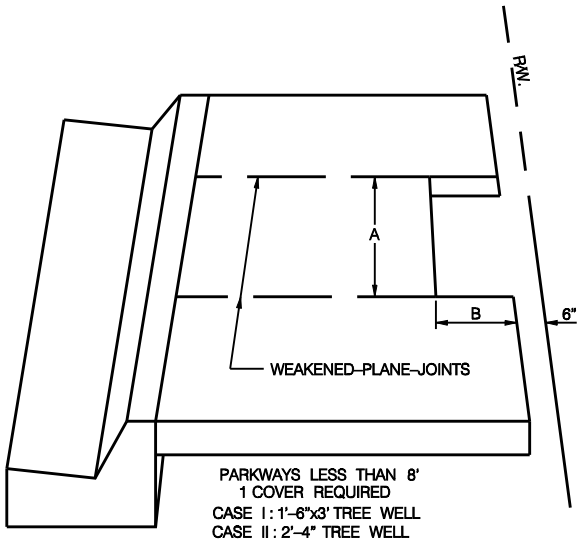
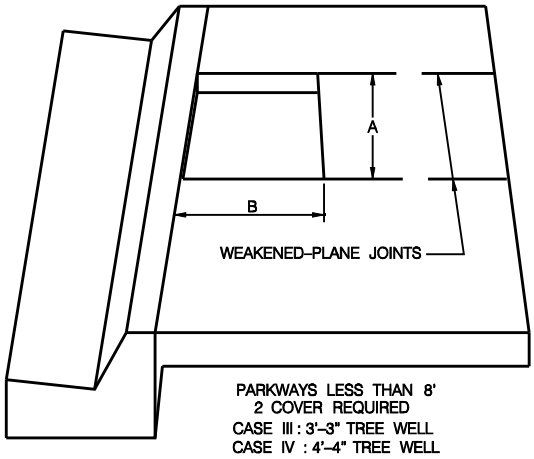
APPROVED: REW
REVISED:

STANDARD PLAN

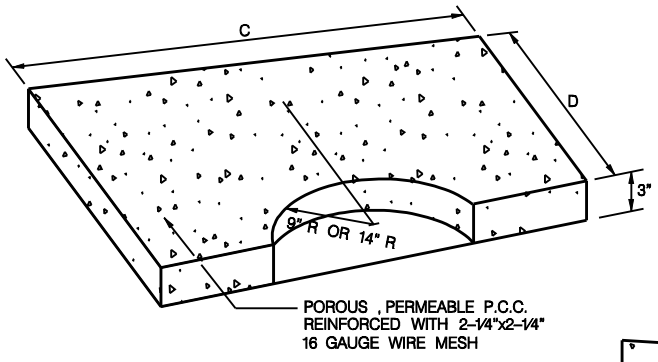
1201–8

SHEET 4 OF 6



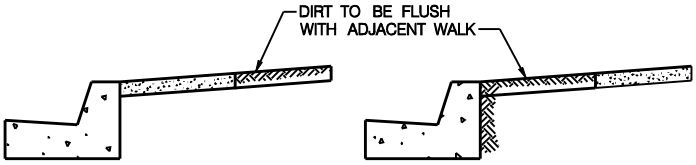


TREE WELLS



POROUS TREE WELL COVER

CASE	A	B	C	D
I	3'–0"	1'–6"	2'–11"	1'–5½"
II	4'–0"	2'–0"	3'–11"	1'–11 ½"
III	3'–0"	3'–0"	2'–11"	1'–5½"
IV	4'–0"	4'–0"	3'–11"	1'–11 ½"



TYPICAL SECTIONS

NOTES :

1. TREE WELLS SHALL BE SPACED AS DIRECTED OR INDICATED ON THE CONTRACT DOCUMENTS.
2. LOCATION OF TREE WELLS WILL BE SUBJECT TO THE FOLLOWING CONDITIONS :
   - A. 50' FROM CURB RETURNS.
   - B. 20' FROM LIGHT STANDARDS.
   - C. 10' FROM FIRE HYDRANTS.
   - D. 10' FROM DRIVEWAYS.
3. COVERS ARE TO BE COLORED BUFF USING AN ACCEPTABLE COLORING AGENT.
4. TREE WELLS ARE TO BE BACKFILLED WITH CLEAN DIRT AND FLUSH WITH ADJACENT WALK UNTIL TREES ARE PLANTED.
5. PARKWAYS LESS THAN 8' : CASE 1 – UNLESS OTHERWISE SPECIFIED. CASE II – USE WHERE THERE'S AN EXISTING FENCE OR WALL AT THE PL. PARKWAY 8' OR GREATER : CASE III – UNLESS OTHERWISE SPECIFIED. CASE IV – MAY BE SPECIFIED WITH WALKS 7' OR GREATER.

CITY OF SHREVEPORT

TREE WELL

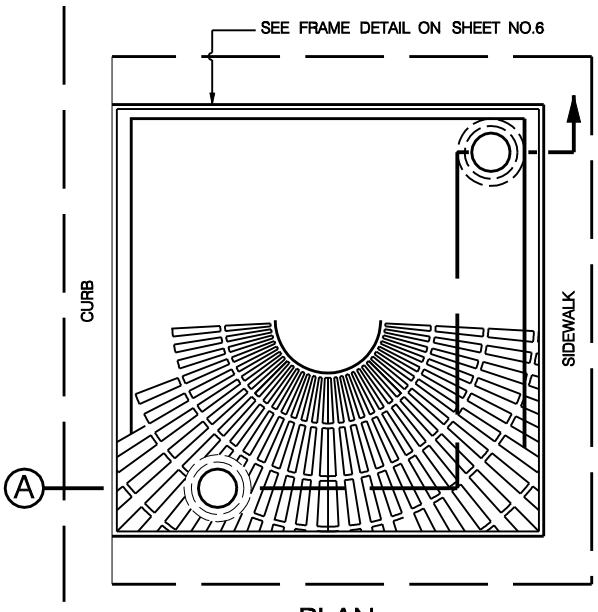
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

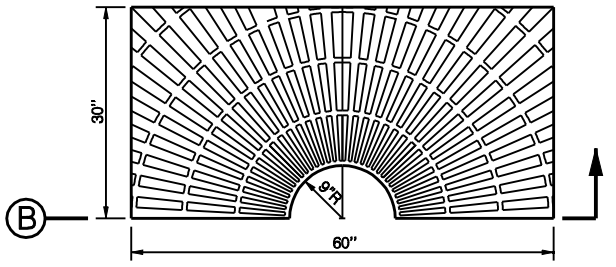
STANDARD PLAN

1201–9

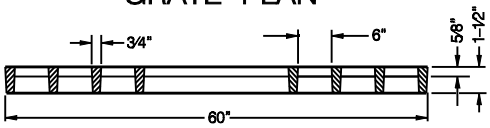
SHEET 5 OF 6



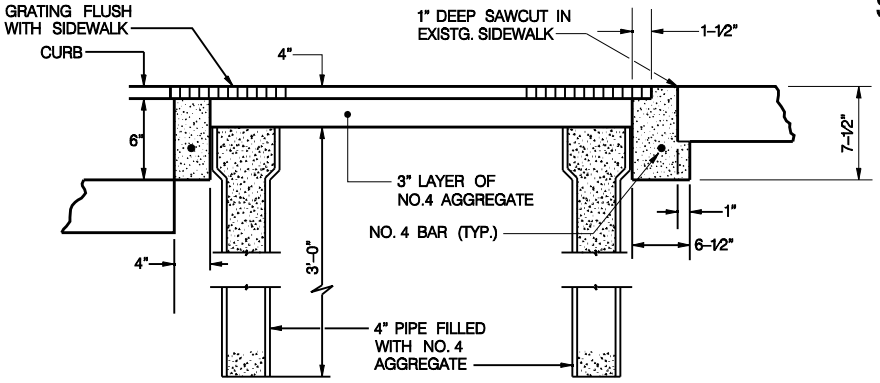
PLAN



GRATE PLAN



SECTION (B)



SECTION (A)

NOTES :

1. GRATE MATERIAL TO BE CAST IRON.
2. GRATE PATTERN AS SPECIFIED ON PROJECT PLANS AND / OR IN SPECIFICATIONS.
3. EXISTING SIDEWALK SHALL BE CAREFULLY SAWCUT PREPARATOTY TO LAYING OF FRAME. SAWCUT OVER–RUNS SHALL BE CLEANED AND FILLED WITH EPOXY APPROVED BY THE ENGINEER AND FINISHED TO SIDEWALK GRADE.
4. THE PIPE MAY BE CIP, ACP, VCP, ABS, PVC, GALV. STL. OR ASPHALT IMPREGNATED FIBER DUCT, AND IT MAY BE BELL OR PLAIN END.
5. AFTER ALL OTHER WORK PERTINENT TO PLATING HAS BEEN COMPLETED, EACH TREE SHALL BE WATERED IMMEDIATELY WITH A MINIMUM OF 20 GALLONS OF WATER AND REPEATED 2 TIMES IN THE NEXT 3 DAYS. AFTER THE WATER HAS SETTLED AND THE SOIL IS SUFFICIENTLY DRY, THE SOIL SHALL BE GRADED AND TAMPED AND 3 – INCH LAYER OF CONCRETE AGGREGATE SHALL BE PLACED AND GRADED.

TYPE 4

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TREE WELL

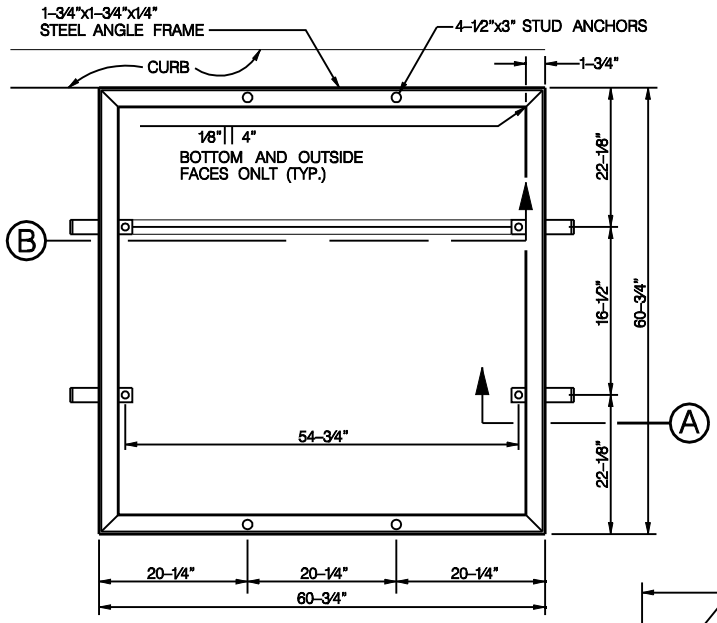
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

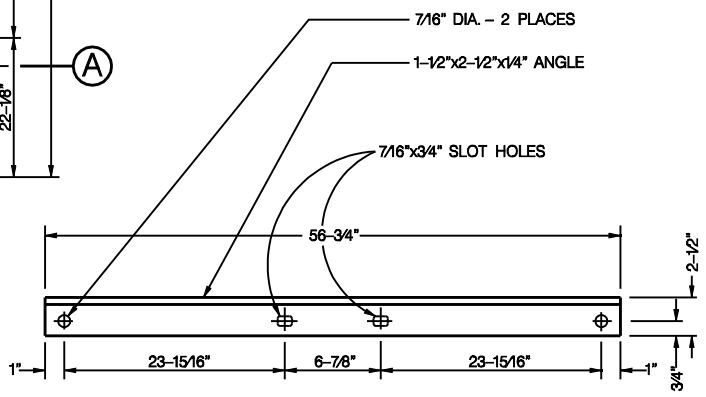
STANDARD PLAN

1201-10

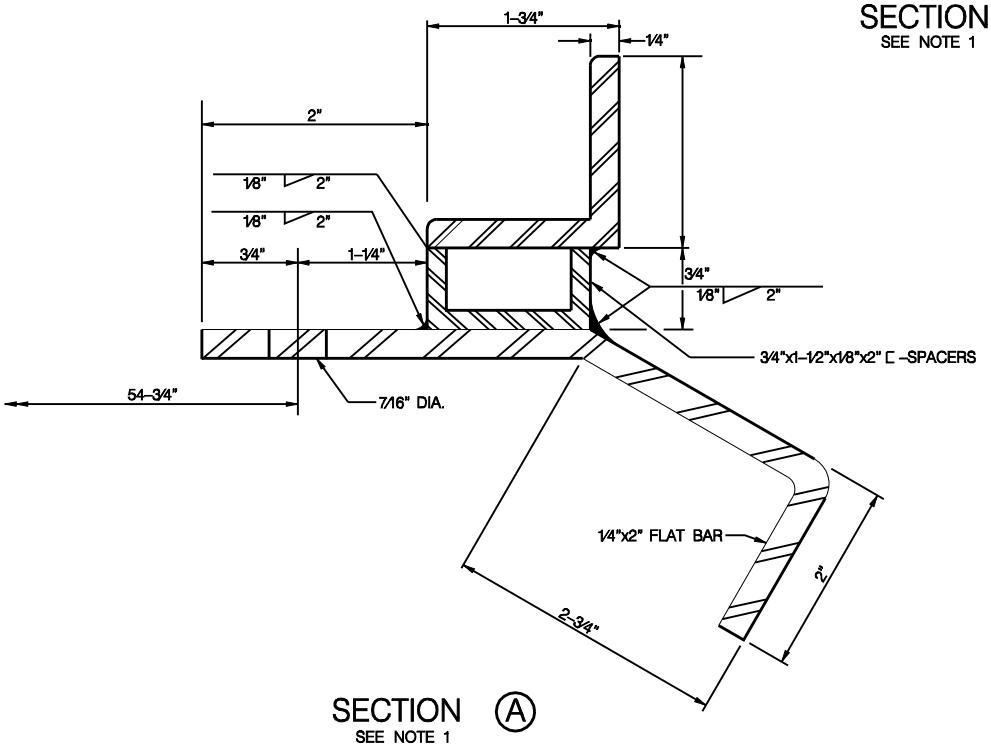
SHEET 6 OF 6



FRAME DETAIL



SECTION (B)
SEE NOTE 1



SECTION (A)
SEE NOTE 1

NOTES :

1. SECTION "A" AND "B" REQUIRED ONLY WHEN TREE GUARD IS REQUIRED.
2. ALL METAL PARTS AND FRAME SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

TYPE 4

CITY OF SHREVEPORT

TREE WELL

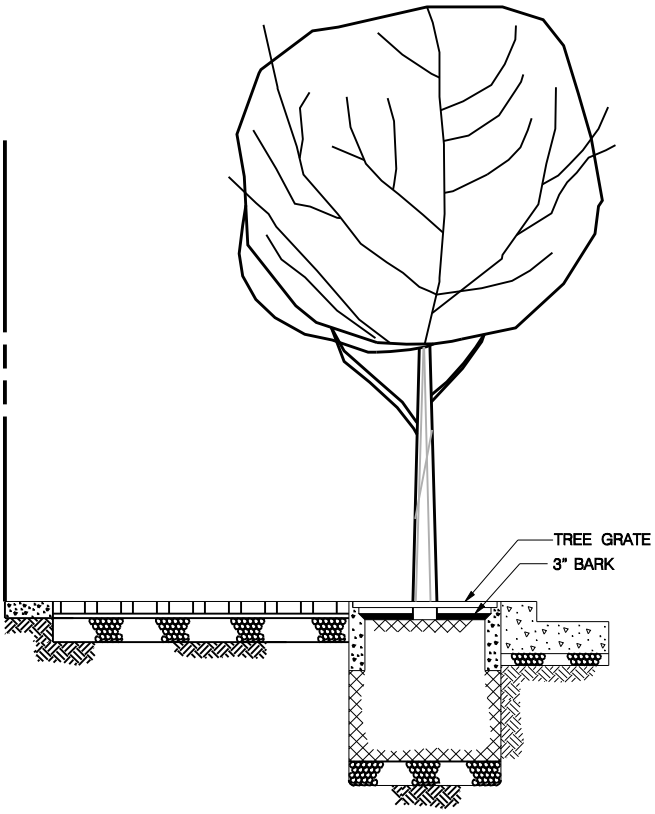
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

1201–11

SHEET 1 OF 1

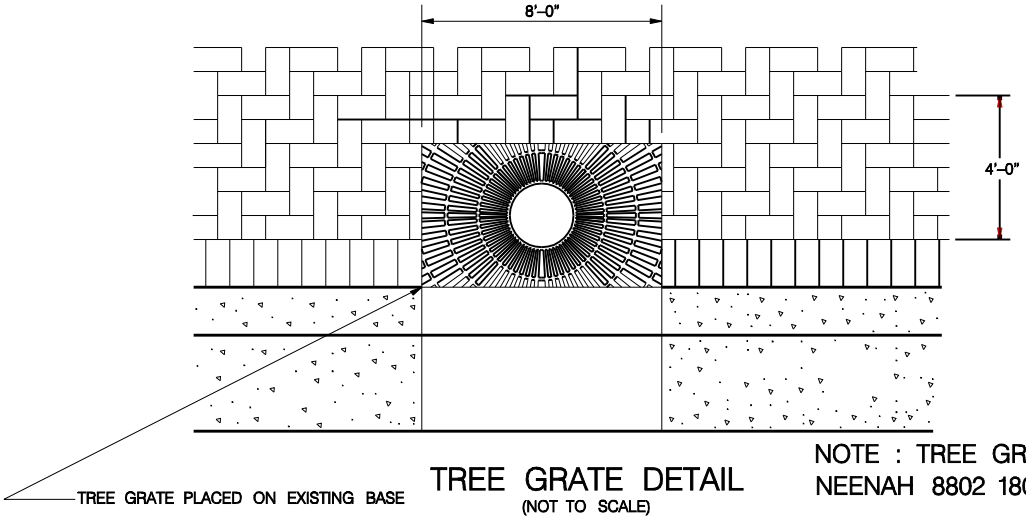


NOTE :

1. TREE WELL DEPTH SHALL BE 48" MINIMUM
2. BARK SHALL BE INCLUDED IN UNIT PRICE OF TOP SOIL
3. TREE WELLS CAN BE PRECAST OR CAST IN PLACE CONCRETE WALL THICKENESS A MINIMUM OF 6" AND A DEPTH OF 18".

TREE WELL DETAIL

(NOT TO SCALE)



TREE GRATE DETAIL

(NOT TO SCALE)

NOTE : TREE GRATE SHALL BE NEENAH 8802 180° OR EQUIV.

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE TREE WELL

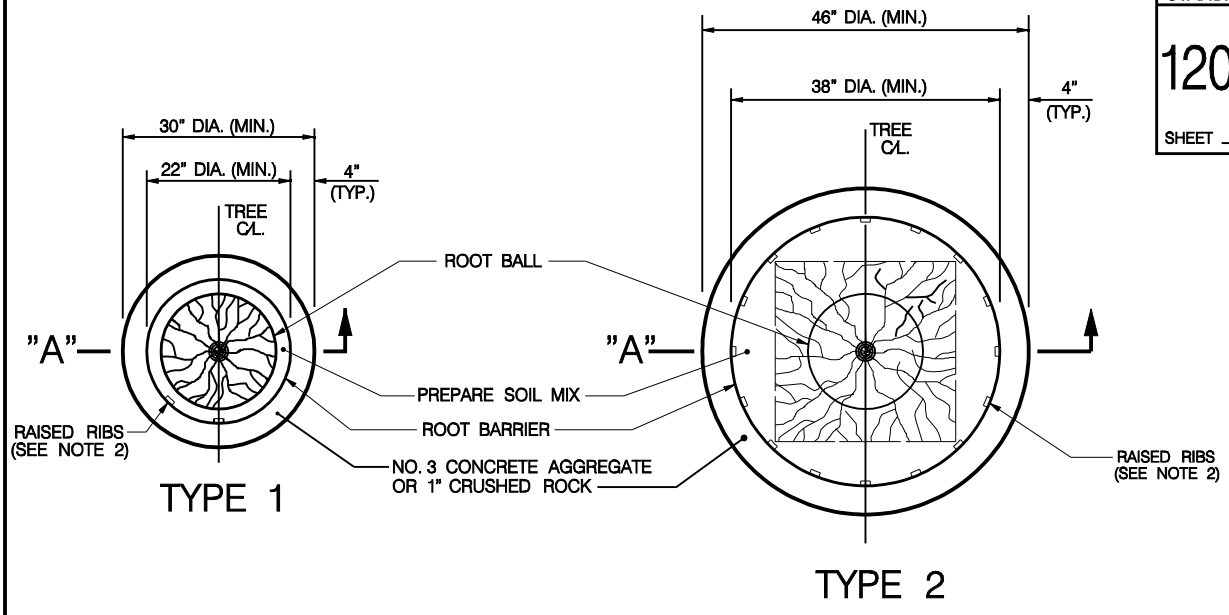
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

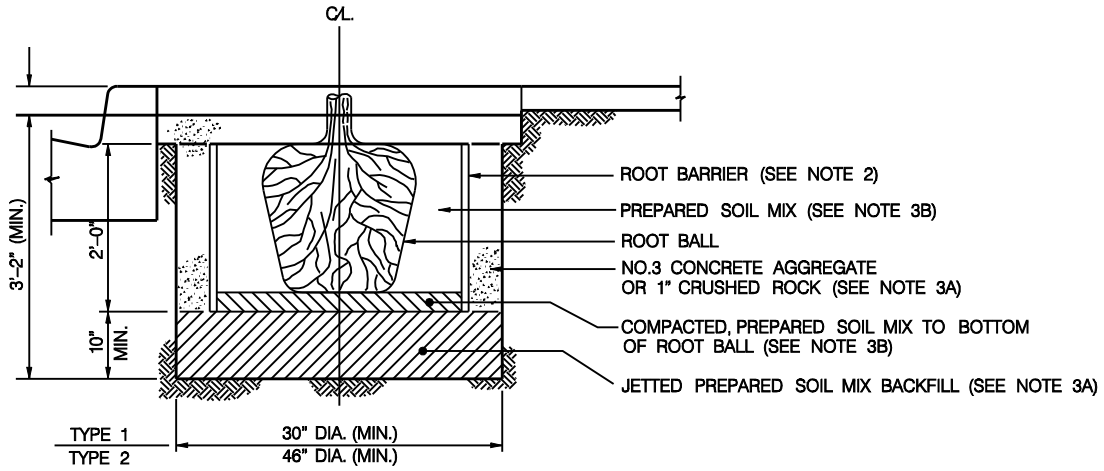
DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

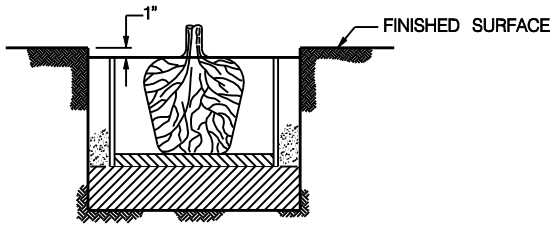
1201–13

SHEET 1 OF 1





SECTION "A"



NOTES :

1. SEE PROJECT PLANS FOR TYPE OF TREE WELL COVER OR TREE GUARD AND GRADING TO BE USED.
2. ROOT BARRIER SHALL BE FABRICATED FROM A HIGH DENSITY AND HIGH IMPACT PLASTIC SUCH AS POLYVINYL CHORIDE, ABS OR POLYETHYLENE AND HAVE A MINIMUM THICKNESS OF 0.06 INCH. THE PLASTIC SHALL HAVE 1⁄2 – 3⁄4 INCH HIGH RAISED VERTICAL RIBS ON THE INNER SURFACE SPACED NOT MORE THAN 6 – 8 INCHES APART.
3. PLANTING SHALL CONFORM TO SUBSECTION 308–4 OF THE STANDARD SPECIFICATIONS, EXCEPT THAT :
   A. THE LOWER 10 INCHES OF THE EXCAVATION SHALL BE BACKFILLED WITH PREPARED SOIL MIX AND JETTED PRIOR TO PLACING THE ROOT BARRIER AND THE NO. 3 CONCRETE AGGREGATE, OR 1" CRUSHED ROCK.
   B. PREPARED SOIL MIX SHALL BE PLACED IN THE PLANTING HOLE AND COMPACTED TO BOTTOM OF ROOT BALL ELEVATION PRIOR TO PRECEEDING WITH TREE PLANTING.

CITY OF SHREVEPORT

TREE ROOT BARRIER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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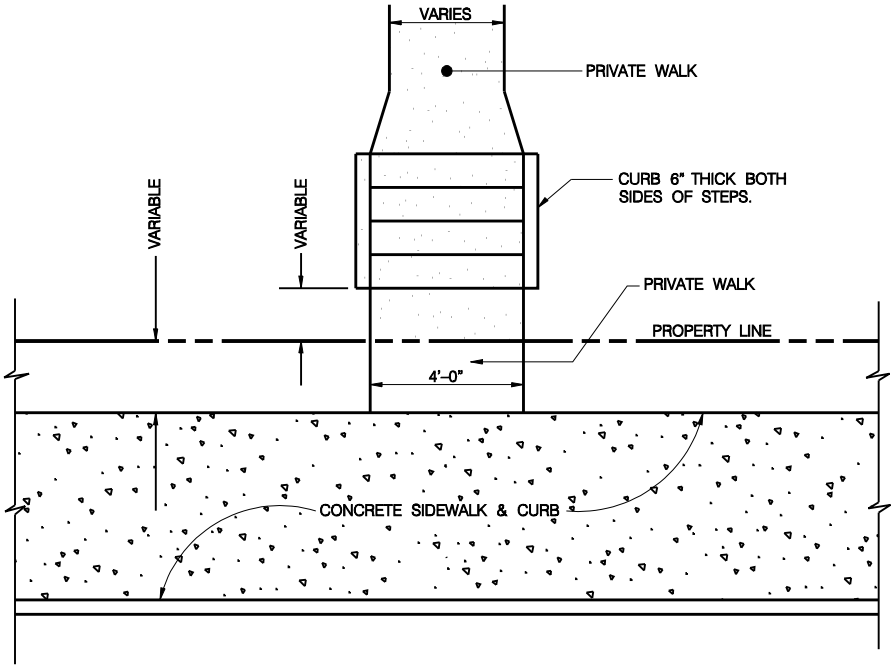
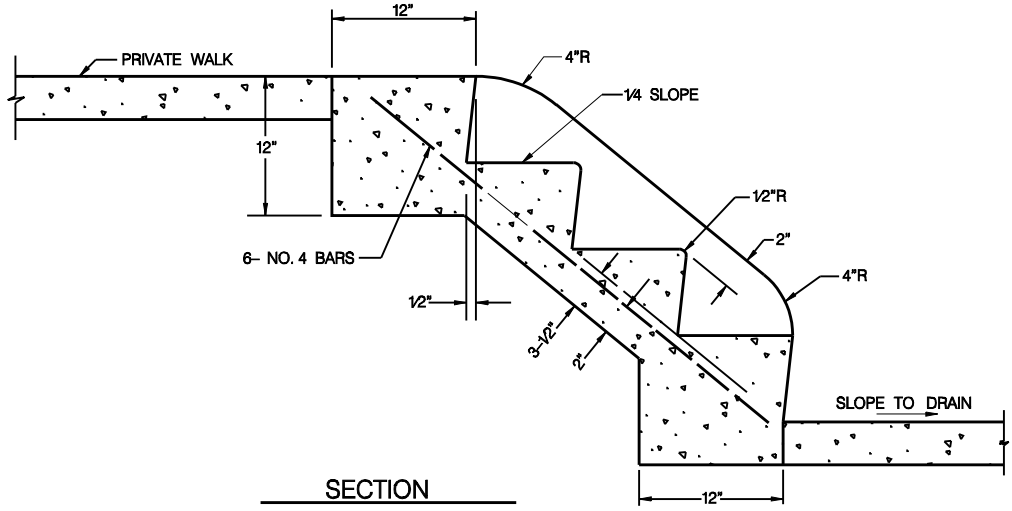
STANDARD PLAN

601–22

SHEET 1 OF 1



PLAN



SECTION

GENERAL NOTES

STEPS SHALL BE 4'–0" WIDE, CURB TO CURB, PLUS 6" CURBS ON EACH SIDE.
CEMENT CONCRETE SHALL BE CLASS 6 (3/4) TROWEL FINISH.
NUMBER OF STEPS SHALL SUIT INDIVIDUAL CONDITIONS WITH TREAD AND RISER DIMENSIONS TO SUIT THE GRADE.
RISERS SHALL BE 5" MIN. 7" MAX. TREAD SHALL BE MIN.11", MAX. 12".

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

CONCRETE STEPS

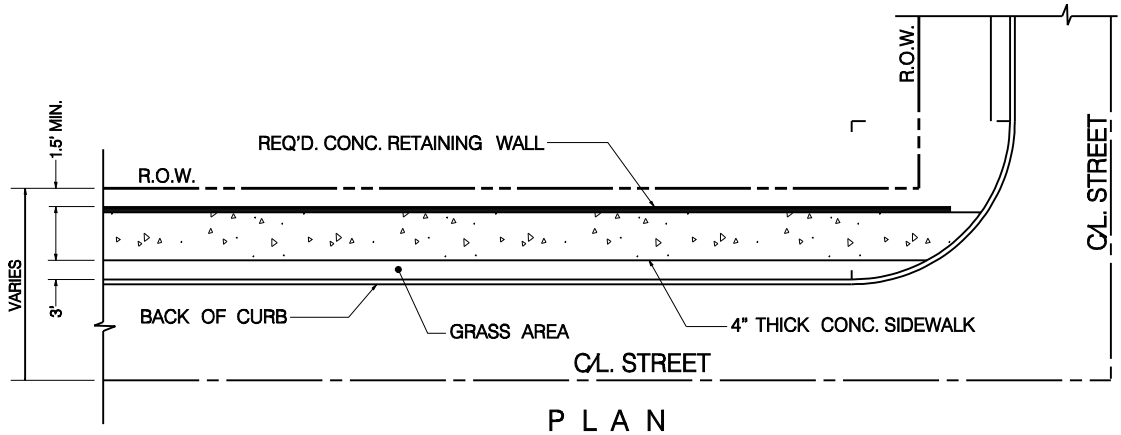
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

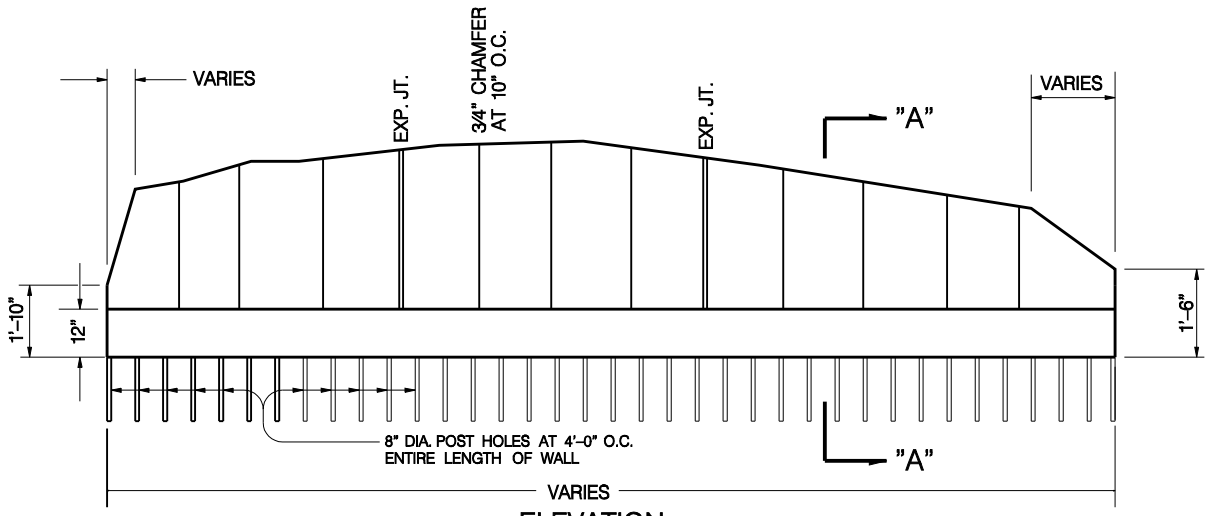
621-23

SHEET 1 OF 1



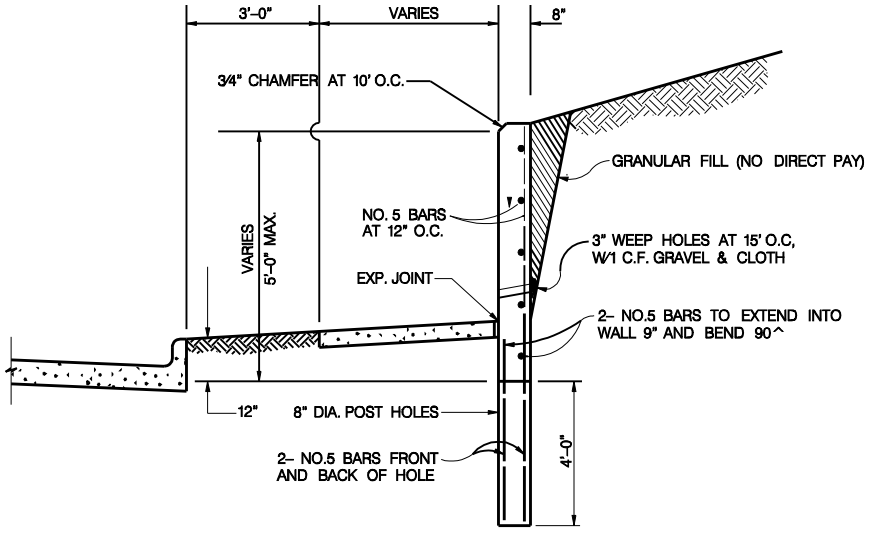
PLAN

NOT TO SCALE



ELEVATION

NOT TO SCALE



SECTION "A – A"

NOT TO SCALE

CITY OF SHREVEPORT

POST – HOLES RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED:

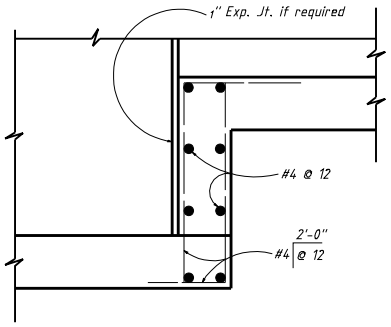
APPROVED: REW

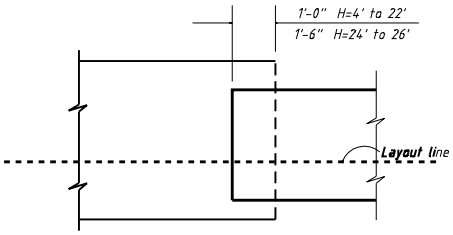
REVISED:

STANDARD PLAN

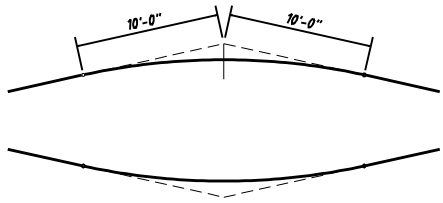
601-24

SHEET 1 OF 5

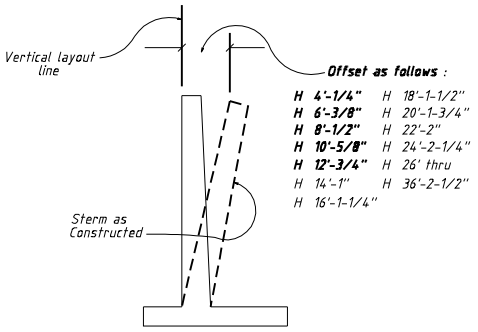




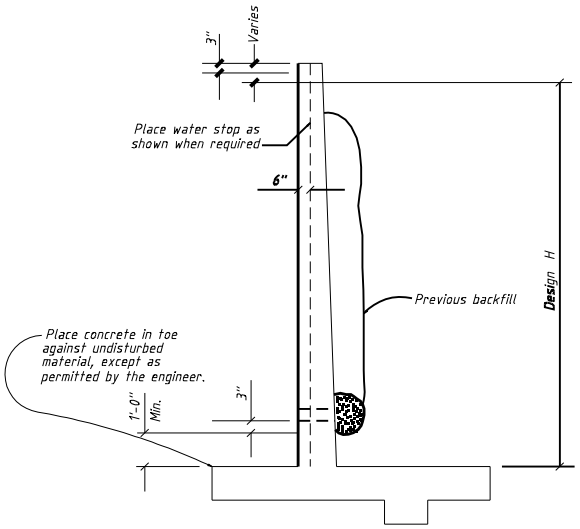
FOOTING STEP



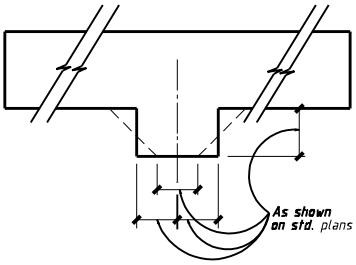
20' VC. AT TOP OF WALL SLOPE CHANGE WHERE SHOWN ON THE PLANS



APPROX. WALL OFFSET VALUES



TYPICAL SECTION



OPTIONAL TYPE KEY DETAIL

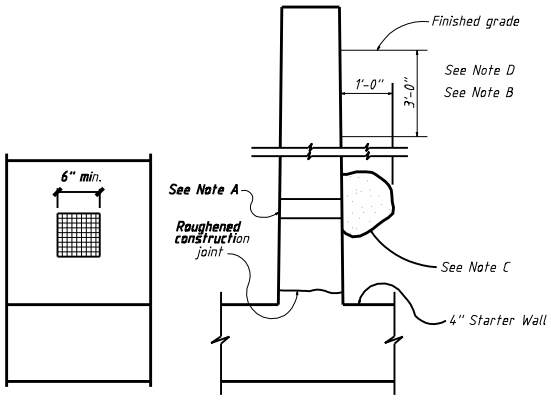
A. 4" dia. drains @ 25' max. center (9" cc for Type 3 and 9'-3" cc for Type 4 Retaining Walls). For walls adjacent to sidewalks or curb. provide 4" cast iron or abestos cement pipe under the sidewalk to discharge thru curb face. Exposed wall drains shall be located 3" above finished grade.

B. 6" square aluminum or galvanized steel wire 4 mesh hardware cloth (Min. wire diameter 0.03") Anchor firmly to back face.

C. Previous back III material continuous behind retaining wall.

E. Provide vertical construction joints at steps or 40' max. O.C.

F. Provide expansion joint at 40' max. O.C.



ELEVATION SECTION

WEEP HOLE AND PERVIOUS BACKFILL

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL

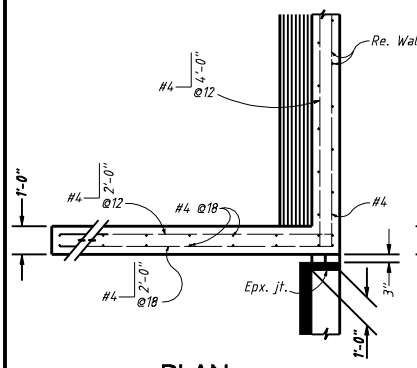
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

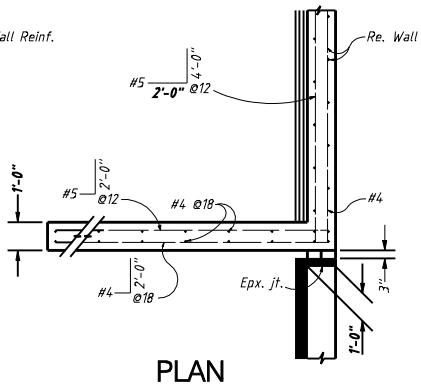
STANDARD PLAN

601-25

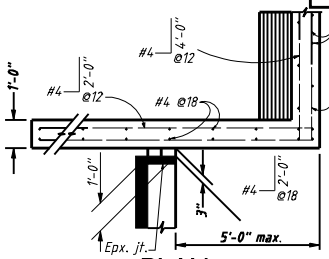
SHEET 2 OF 5



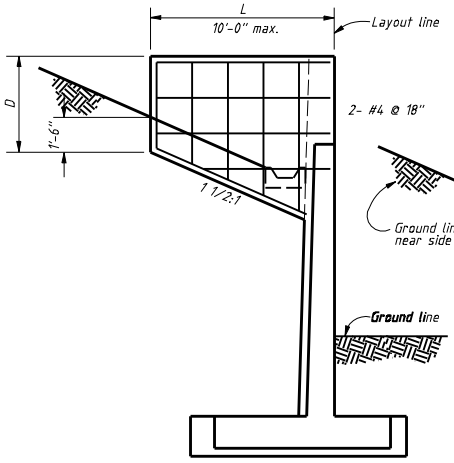
PLAN
(For Return Wall Type "C")



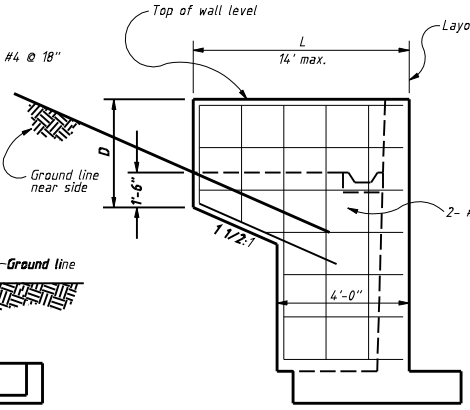
PLAN
(For Return Wall Type "A")



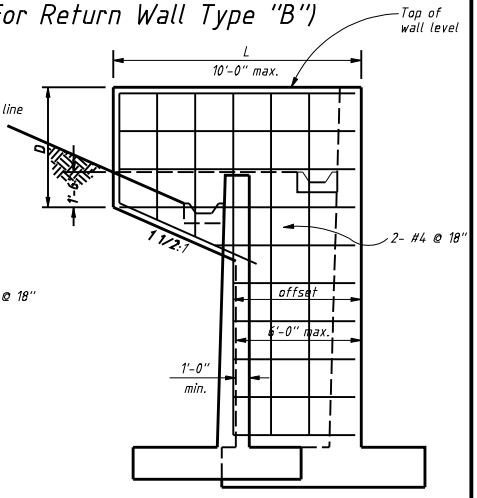
PLAN
(For Return Wall Type "B")



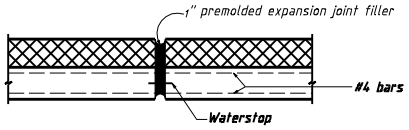
ELEVATION
RETURN WALL TYPE "C"
Use where H=10' or more on straight walls



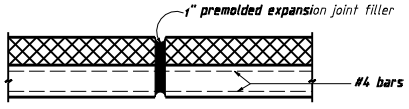
ELEVATION
RETURN WALL TYPE "A"
Use where H=8' or less



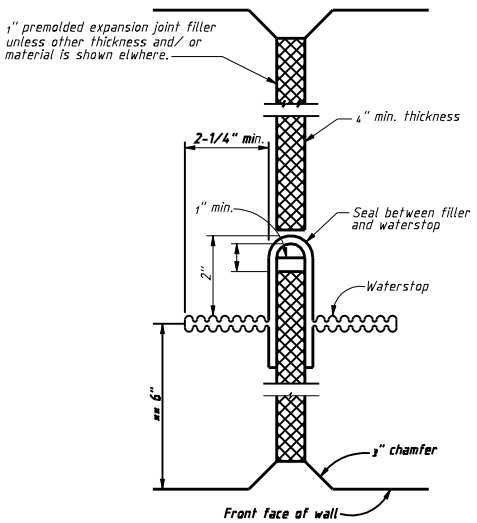
ELEVATION
RETURN WALL TYPE "B"
Use where H=10' or more on offset walls



PLAN OF WALL WITH
WATERSTOP



PLAN OF WALL WITH
EXPANSION JOINT ONLY



WALL EXPANSION JOINT
AND WATERSTOP DETAIL

* Hole will be permitted in the outer 1" of the web for wire, rings, etc. The web to #3 reinforcing bars @ 12" max. intervals to support the waterstop in proper position during concrete placement. Alternative detail may be submitted for approval of the Engineer. Waterstop to have 5 or more parts of raised ribs to provide 0.1 sq. in. min. rib cross - section area on each half of the waterstop.

** For wall thickness less than 12", use 1" the wall thickness.

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REINFORCED CONCRETE RETAINING WALL

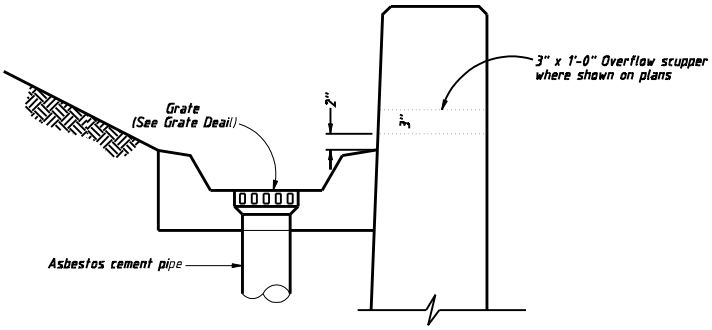
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

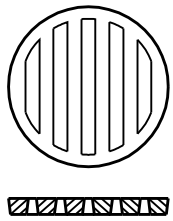
STANDARD PLAN

601–26

SHEET 3 OF 5

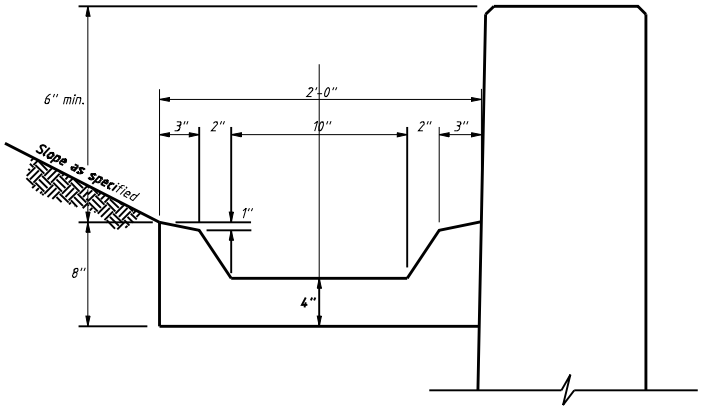


WALL DRAIN DETAIL

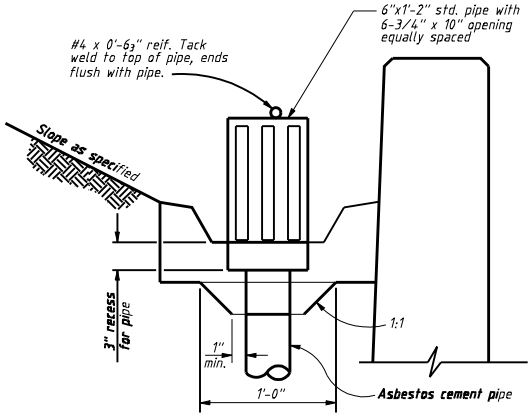


WALL DRAIN DETAIL

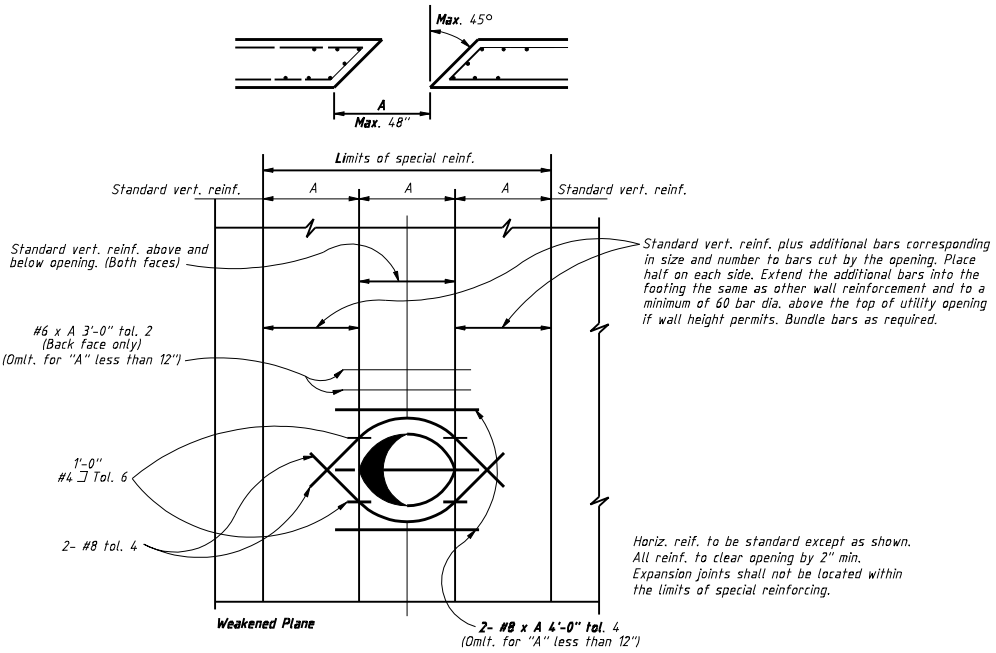
Size to fix Standard Hubs



TYPICAL GUTTER DETAIL



WALL DRAIN WITH PIPE DOME



RETAINING WALL UTILITY OPENING

Max. size of opening (A) = 48"

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REINFORCED CONCRETE RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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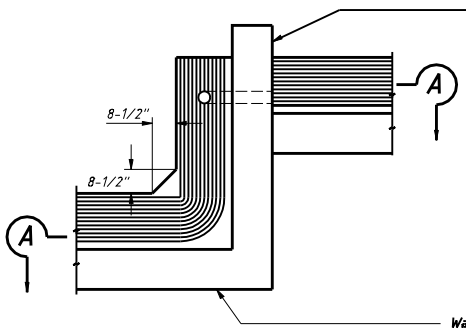
APPROVED: REW

REVISED:

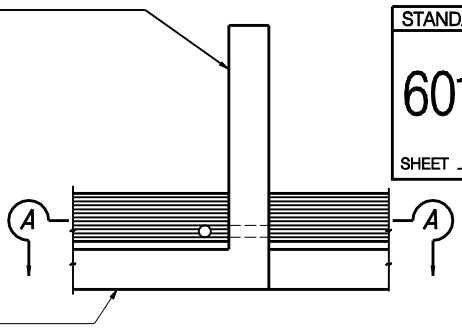
STANDARD PLAN

601-27

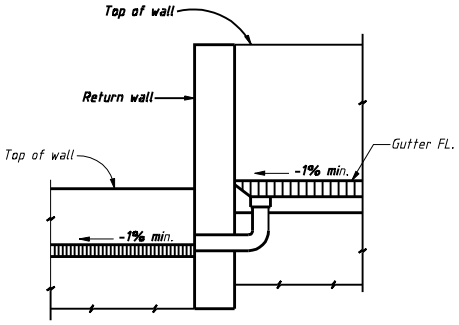
SHEET 4 OF 5



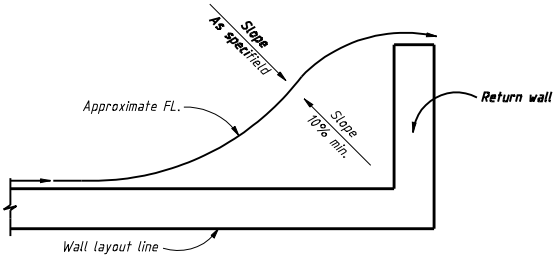
PLAN – OFFSET WALL



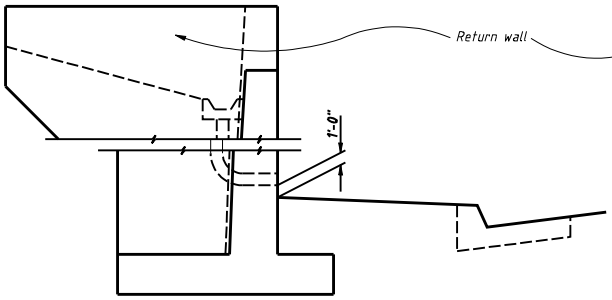
PLAN – CONTINUOUS WALL



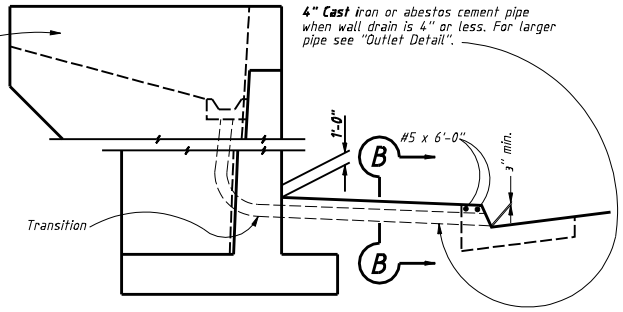
SECTION "A – A"



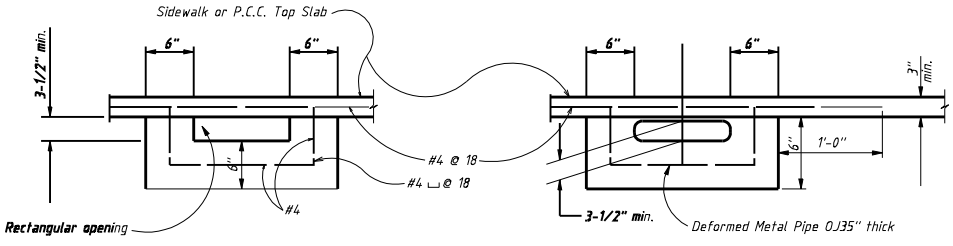
WALL DRAINAGE
WHERE GUTTER NOT REQUIRED



RETAINING WALL, FACE OF WALL OUTLET



RETAINING WALL, GUTTER OUTLET



NOTE : Area of opening to be not less than that of pipe from wall gutter. Making opening transition in wall. Edge opening in curb face to 3" min. radius.

OUTLET DETAIL – SECTION "B – B"

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
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APPROVED: REW
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STANDARD PLAN

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SHEET 5 OF 5

DESIGN CRITERIA

Design Conditions

Design H may be exceede by 6" before going to next size. Footing key is required except when found unnecessary by the Engineer. Special footing design is required where foundation material is incaplble of supporting toe pressure loads listed in table.

Design Data

fc = 1300 psi f'c = 3250 psi fs = 2400 psi n = 10 earth = 120 pcf
Case I Equivalent fluid pressure = 36 psf max. for determination of toe pressure. 27 psf min. for determination of heel pressure.
Case II, III, IV. Wall design is based on Rankine's formular with O = 32' - 42'

Quantities

Quantities do not include the wall portion above "Gutter Elevation" and are for design purposes only.

Loading Conditions :

Case I 2' Surcharge
Case II 2:1 Unlimited surcharge
Case III 1-1/2 :1 7' limits surcharge
Case IV 1-1/2 :1 Unlimited surcharge

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REINFORCED CONCRETE RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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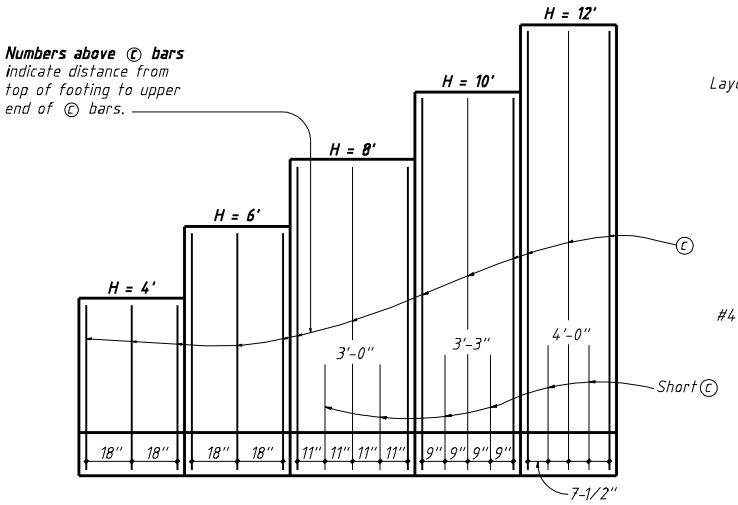
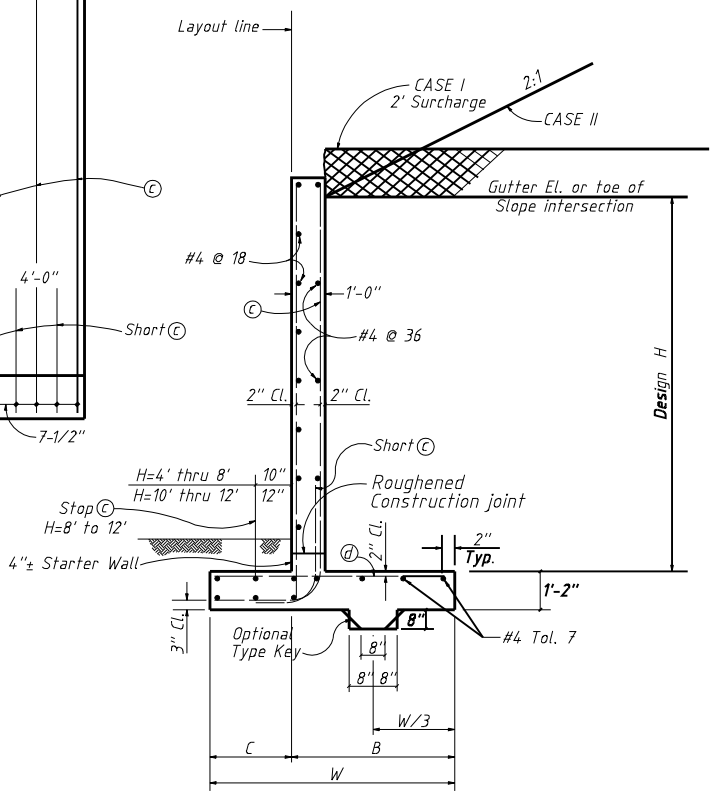
STANDARD PLAN

601-29

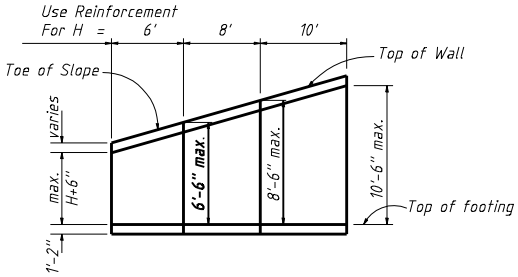
SHEET 1 OF 1

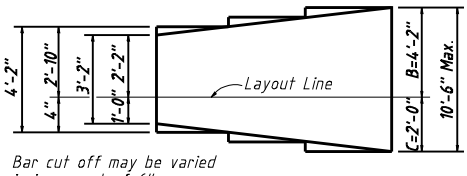


ELEVATION



SECTION





Bar cut off may be varied in increment of 6"

TYPICAL LAYOUT EXAMPLE

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA

Design H		4'	6'	8'	10'	12'
W		3'-2"	4'-2"	5'-2"	6'-2"	7'-2"
C		1'-0"	1'-4"	1'-8"	2'-0"	2'-4"
B		2'-2"	2'-10"	3'-6"	4'-2"	4'-10"
ⓒ bars		#5@18	#5@18	#5@11	#6@9	#7@7-1/2
ⓓ bars		#5@18	#5@18	#5@22	#7@18	#8@15
Total ⓔ bars		6 - #6	6 - #6	6 - #6	10 - #7	10 - #7
Total ⓕ bars					4@ #7	4@ #7
Case I - Toe Press. psf.		1590	1930	2240	2550	2840
Case II - Toe Press. psf.		1060	1460	1860	2280	2700
Spread Footing	Steel lbs./ft.	17	23	27	46	70
	Conc. cf./ft.	8.6	11.8	14.9	18.1	21.3

NOTES :

For Design Data, Details and Notes See Standard Plan 717-0. Unless otherwise specified use Case I.

CITY OF SHREVEPORT

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CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 1

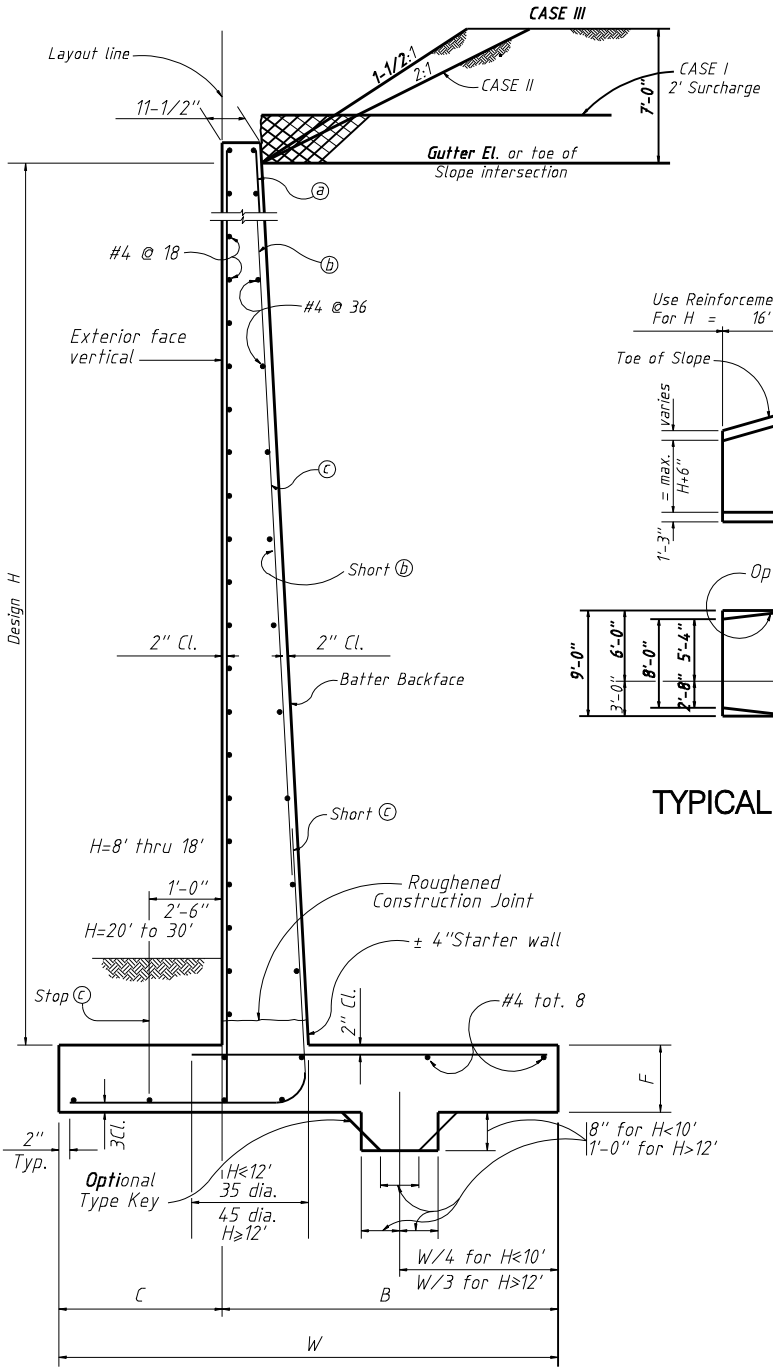
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

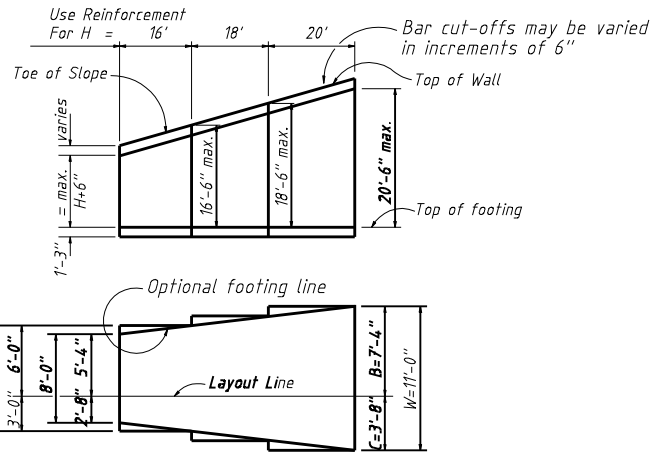
STANDARD PLAN

601-30

SHEET 1 OF 2



SECTION



TYPICAL LAYOUT EXAMPLE

NOTES :

For Design Data, Details and Notes See Standard Plan 717-0. Unless otherwise specified use Case II.

CITY OF SHREVEPORT

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REINFORCED CONCRETE RETAINING WALL TYPE 2

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

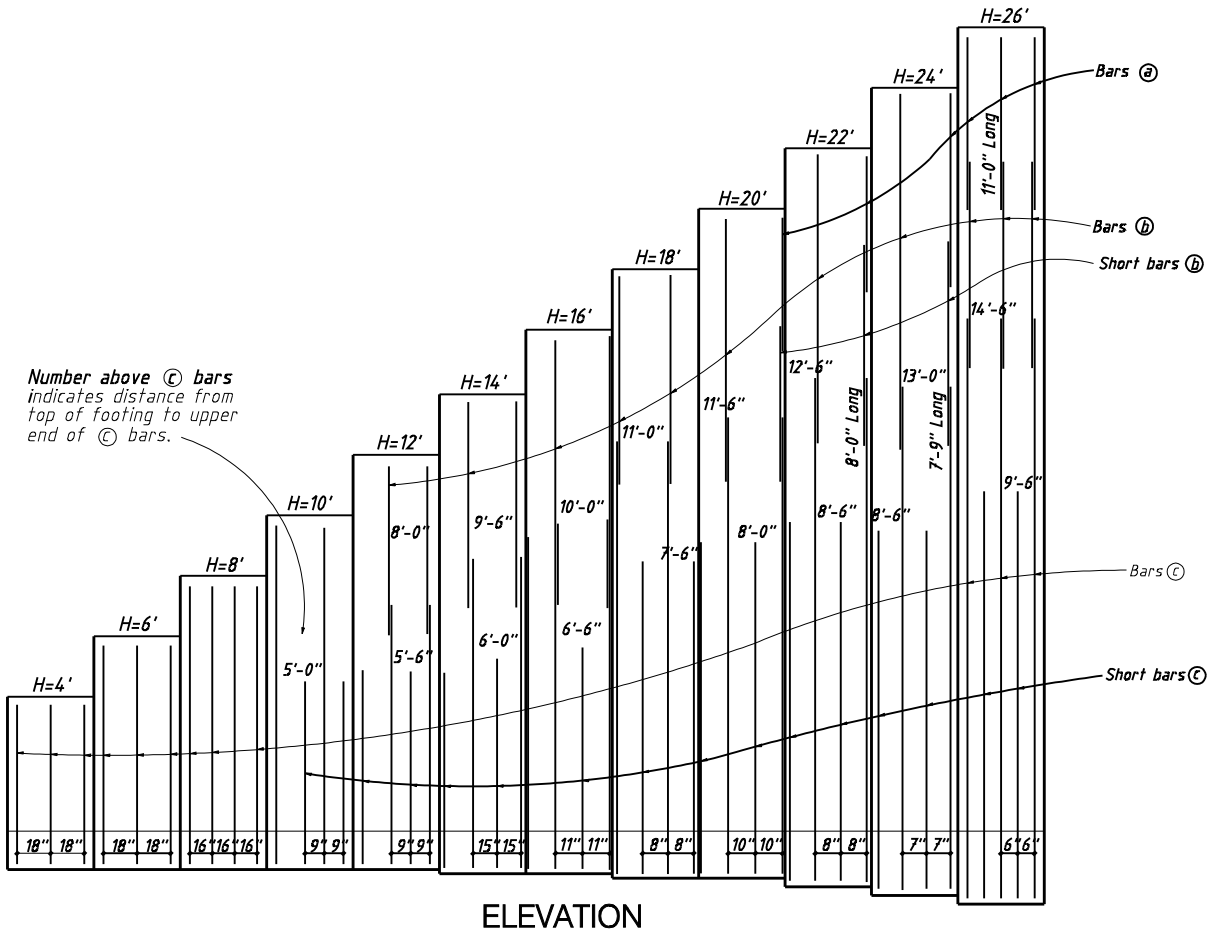
APPROVED: REW

REVISED:

STANDARD PLAN

601-31

SHEET 2 OF 2



ELEVATION

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA

Design H		4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'
W		3'-2"	4'-2"	5'-2"	6'-2"	7'-2"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-3"	14'-3"
C		1'-0"	1'-4"	1'-8"	2'-0"	2'-4"	2'-8"	3'-0"	3'-4"	3'-8"	4'-0"	4'-5"	4'-9"
B		2'-2"	2'-10"	3'-6"	4'-2"	4'-10"	5'-4"	6'-0"	6'-8"	7'-4"	8'-0"	8'-10"	9'-6"
F Spread Ftg.		1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-3"	1'-3"	1'-4"	1'-4"	1'-6"	1'-8"	1'-11"
Baatter		1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	5/8:12	3/4:12
ⓐ bars										#5 @ 20	#5 @ 32	#5 @ 28	#5 @ 12
ⓑ bars						#4 @ 18	#6 @ 30	#6 @ 22	#6 @ 16	#8 @ 20	#8 @ 16	#8 @ 14	#8 @ 12
ⓒ bars		#5 @ 18	#5 @ 18	#5 @ 16	#5 @ 9	#6 @ 9	#9 @ 15	#9 @ 11	#9 @ 8	#11 @ 10	#11 @ 8	#11 @ 7	#11 @ 6
ⓓ bars		#5 @ 18	#5 @ 18	#4 @ 16	#4 @ 9	#5 @ 9	#8 @ 15	#8 @ 11	#9 @ 8	#10 @ 10	#10 @ 8	#10 @ 7	#10 @ 6
Total ⓔ bars		6 - #6	6 - #6	6 - #6	10 - #7	10 - #7	10 - #7	10 - #7	6 - #7	6 - #7	6 - #7	4 - #7	4 - #7
Total ⓕ bars					4 - #7	4 - #7	4 - #7	4 - #7	4 - #7	4 - #7	4 - #7	2 - #7	2 - #7
Case I	Toe Pr. psf	1600	1900	2200	2500	2800	3300	3500	4000	4300	4600	4900	5300
Case II	Toe Pr. psf	1100	1500	2000	2300	2700	3300	3600	4200	4700	5500	5900	6500
Case III	Toe Pr. psf	1300	1700	2100	2500	2900	3400	3800	4300	4800	5400	5800	6500
Spread Footing	Steel lb/ft.	18	22	28	37	51	80	105	153	192	248	307	409
	Con CF/ft.	8.9	12.5	16.3	20.2	25.4	30.1	34.6	40.1	45.0	52.1	63.3	77.0

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REINFORCED CONCRETE RETAINING WALL TYPE 2

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

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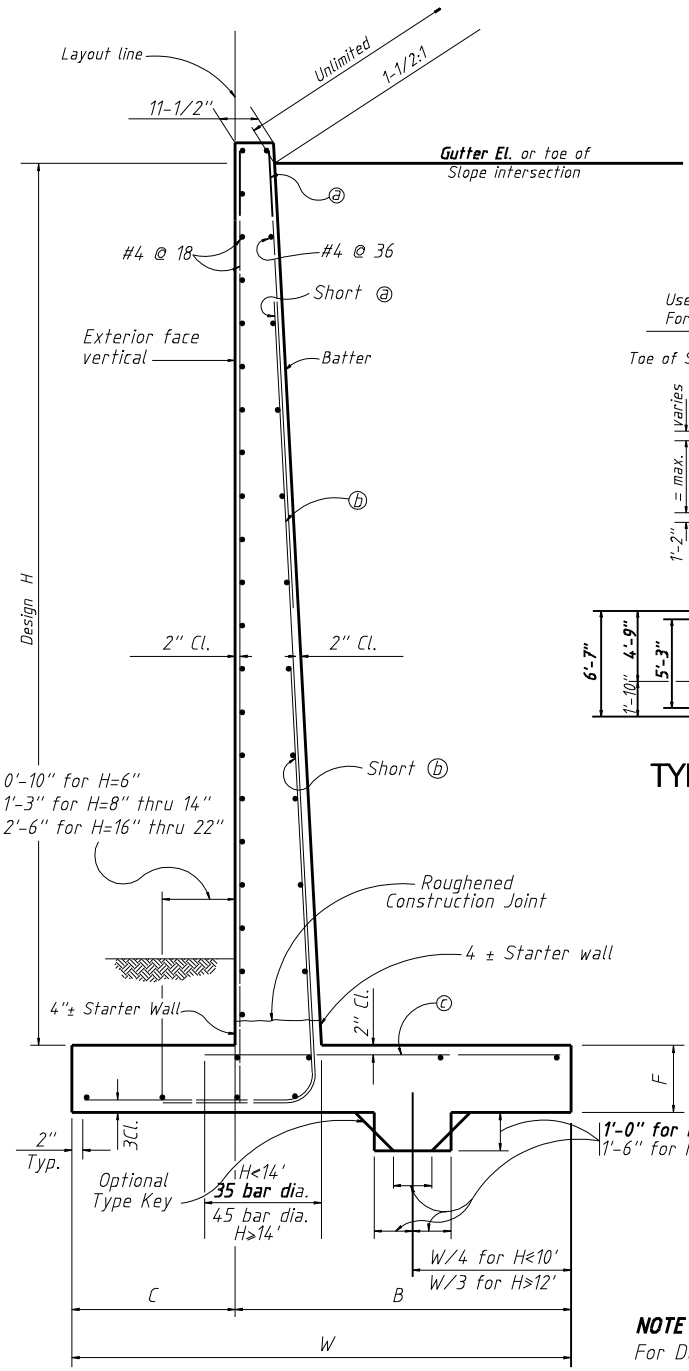
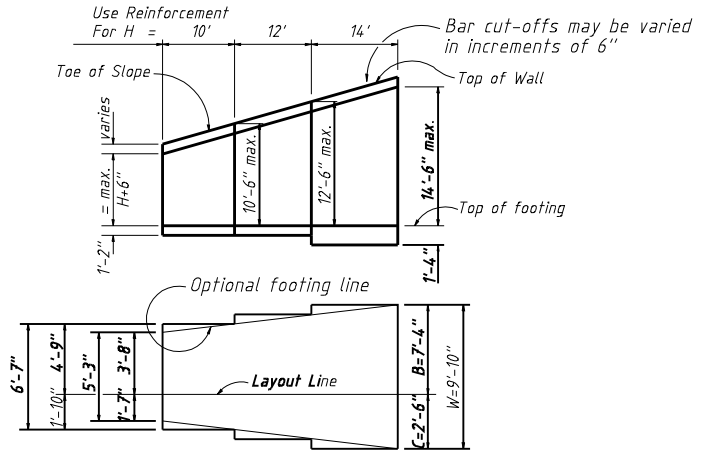
601-32

SHEET 1 OF 2



SECTION



TYPICAL LAYOUT EXAMPLE

NOTE :
For Design Data, Details and Notes See Standard Plan 717-0.

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 3

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

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CHECKED: AZ.
APPROVED: REW
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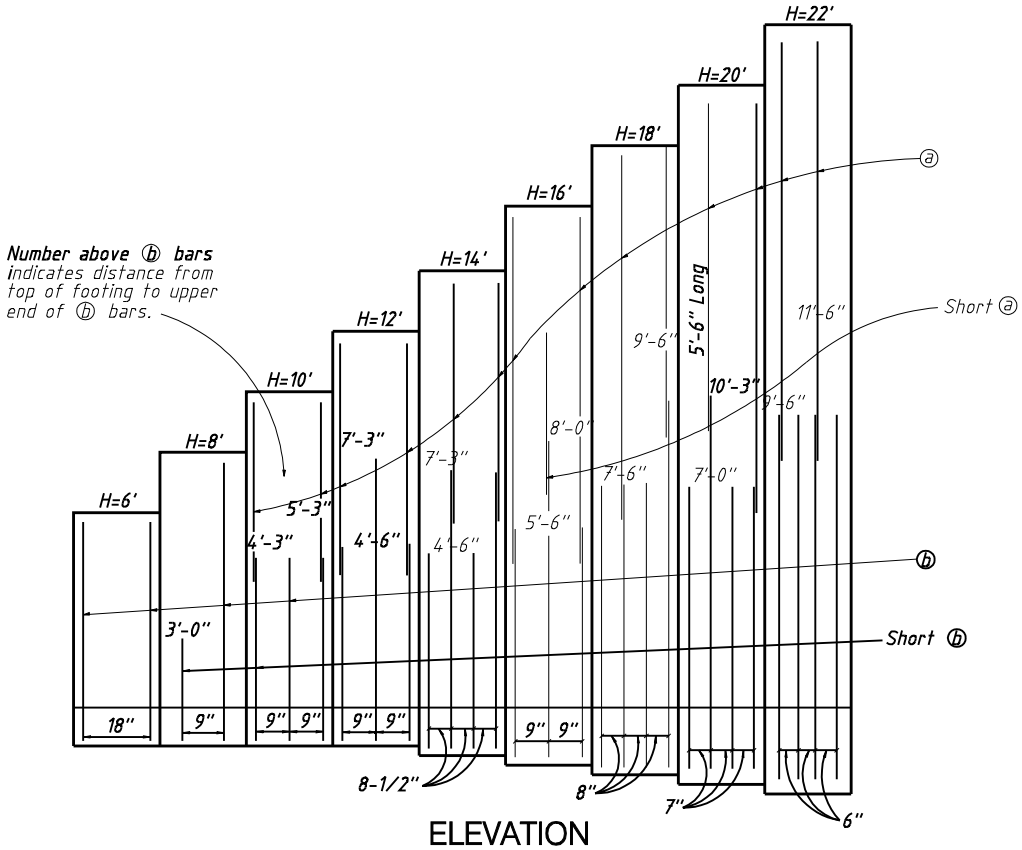
STANDARD PLAN

601–33

SHEET 2 OF 2



ELEVATION

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA

Design H		6'	8'	10'	12'	14'	16'	18'	20'	22'
W		3'-10"	5'-3"	6'-7"	8'-1"	9'-10"	11'-4"	13'-0"	**14'-10"**	17'-6"
C		1'-4"	1'-7"	1'-10"	2'-1"	2'-6"	2'-10"	3'-1"	3'-8"	4'-4"
B		2'-6"	3'-8"	4'-9"	6'-0"	7'-4"	8'-6"	9'-11"	11'-2"	13'-2"
F		1'-2"	1'-2"	1'-2"	1'-2"	1'-4"	1'-7"	1'-10"	2'-1"	2'-4"
Batter		1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	5/8:12	3/4:12	7/8:12
ⓐ bars				**#5 @ 18**	**#5 @ 18**	**#6 @ 17**	**#6 @ 19**	**#8 @ 16**	**#8 @ 14**	**#8 @ 12**
ⓑ bars		**#5 @ 18**	**#5 @ 9**	**#6 @ 9**	**#8 @ 9**	**#9@8-1/2**	#11 @ 9	#11 @ 8	#11 @ 7	
ⓒ bars		#5 @ 18	#5 @ 18	**#6 @ 18**	#6 @ 9	#6@8-1/2	**#8 @ 9**	#8 @ 8	**#8 @ 7**	**6**
Total ⓔ bars		**6 - #6**	**6 - #6**	**10 - #7**	**10 - #7**	**10 - #7**	**10 - #7**	**8 - #7**	**8 - #7**	**8 - #7**
Total ⓕ bars				**#6 - 7**	**#6 - 7**	**#6 - 7**	**#6 - 7**	**#4 - 7**	**#4 - 7**	**#4 - 7**
Toe Pr. psf		2540	**3170**	**3880**	**4470**	**4950**	**5720**	6540	6970	6990
Spread Footing	Con CF/ft.	**13.**2	**17.**5	21.8	29.0	35.7	43.7	54.9	68.2	85.7
	Steel lb/ft.	21	2730	44	69	89	139	184	241	325

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 3

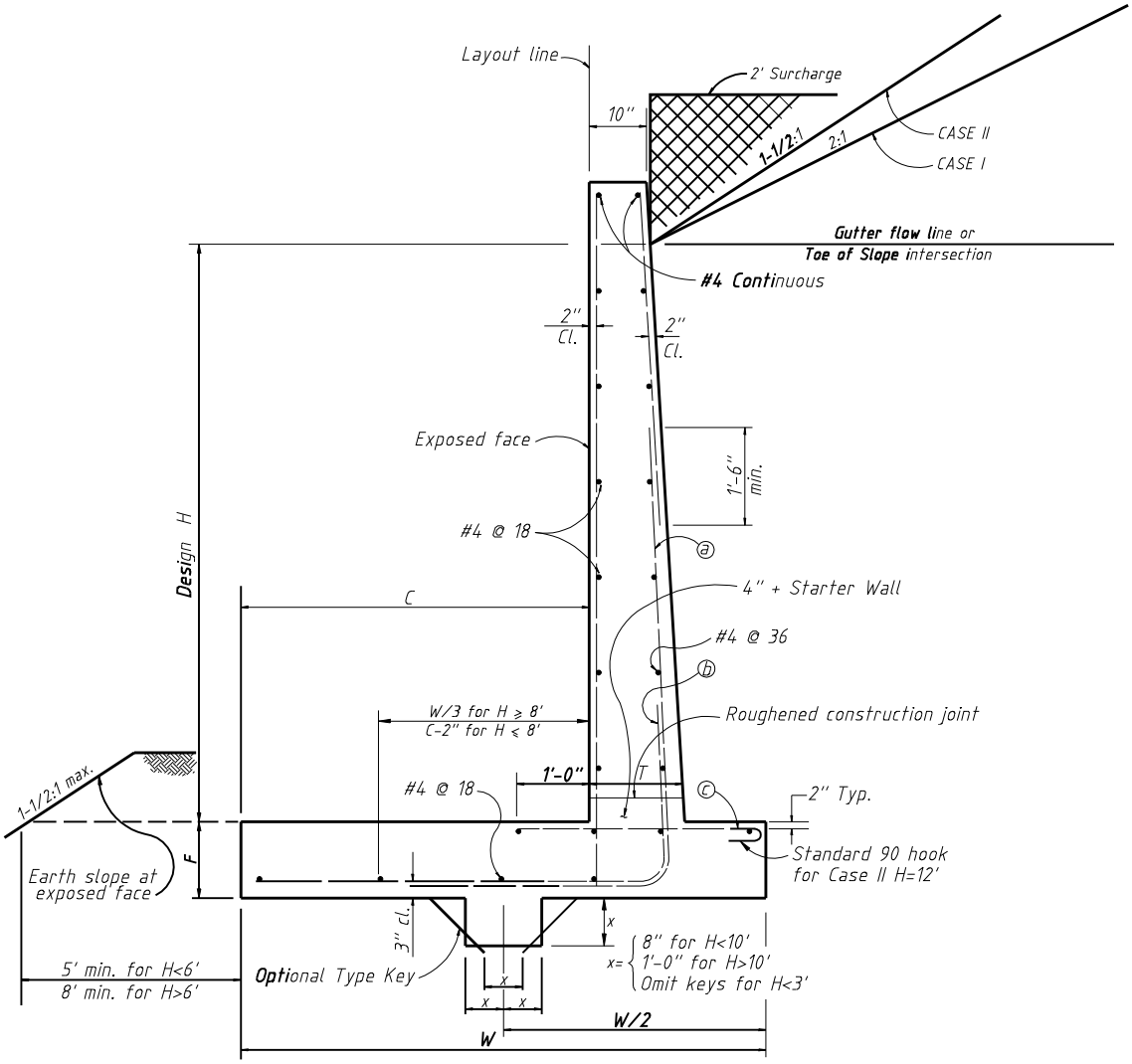
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

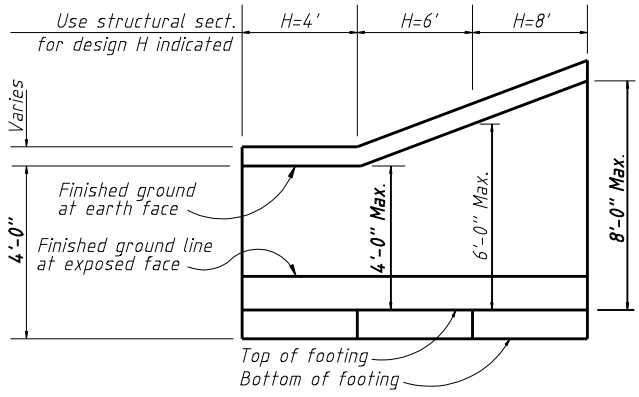
STANDARD PLAN

601-34

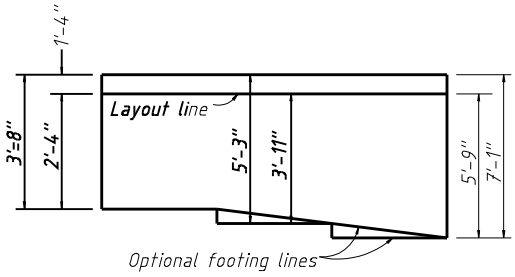
SHEET 1 OF 2



SECTION



ELEVATION



PLAN

TYPICAL LAYOUT EXEMPLE

NOTE :
For Design Data, Details and Notes See Standard Plan 717-0. Unless otherwise specified use Case II.

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 4

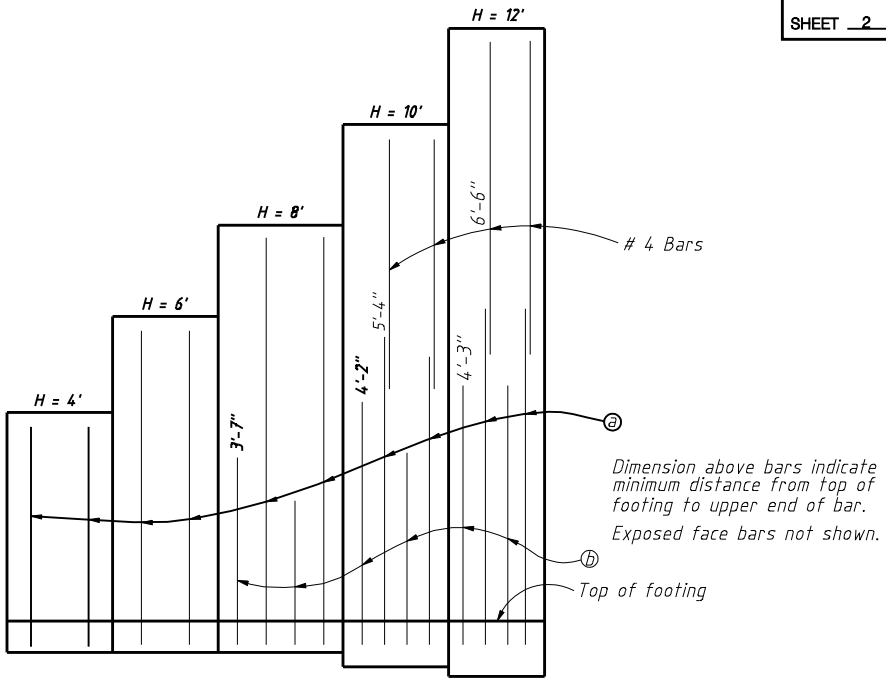
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

601–35

SHEET 2 OF 2



PLACEMENT OF VERTICAL REINFORCEMENT

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA

	CASE I					CASE II				
	LEVEL BACKFIL + 2' SURCHARGE OR 2:1 BACKFILL					1- 1/2:1 BACKFILL				
DESIGN H	4'	6'	8'	10'	12'	4'	6'	8'	10'	12'
W	3'-8"	5'-3"	7'-1"	9'-4"	11'-9"	3'-8"	5'-3"	7'-1"	9'-4"	11'-10"
F	0'-10"	0'-10"	0'-10"	0'-11"	1'-1"	0'-10"	0'-10"	0'-10"	1'-0"	1'-3"
C	2'-4"	3'-11"	5'-9"	8'-0"	10'-5"	2'-4"	3'-11"	5'-9"	7'-11"	10'-3"
T	0'-10"	0'-10"	0'-10"	0'-10"	1'-0"	0'-10"	0'-10"	0'-10"	0'-11"	1'-1"
BAR ⓐ	4 @ 18	5 @ 15	4 @ 15	5 @ 13-1/2	6 @ 11-1/2	4 @ 18	5 @ 14-1/2	4 @ 16	5 @ 12	6 @ 10
BAR ⓑ			6 @ 15	7 @ 13-1/2	7 @ 11-1/2			7 @ 16	7 @ 12	7 @ 10
BAR ⓒ	4 @ 18	4 @ 18	4 @ 18	4 @ 18	4 @ 18	4 @ 18	4 @ 18	4 @ 18	4 @ 18	4 @ 18
SOIL PRES., psf.	630	650	660	660	700	490	560	610	680	750

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 4

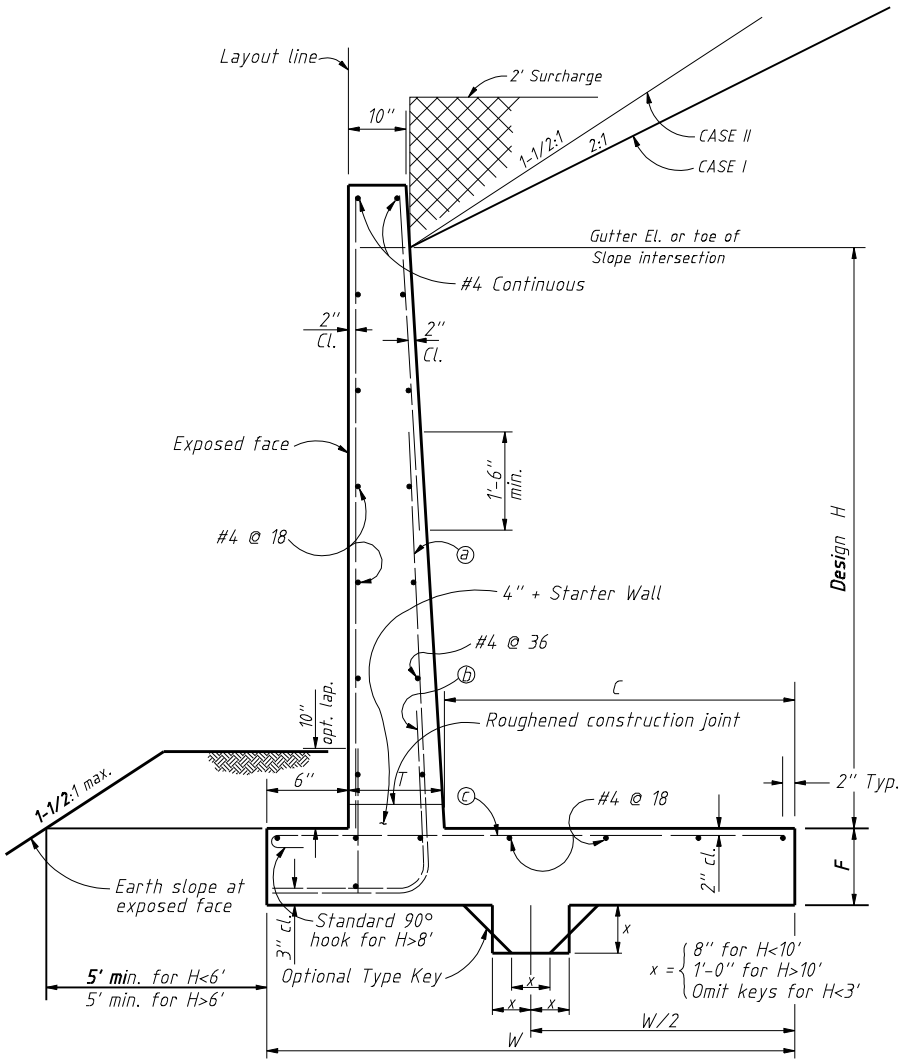
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

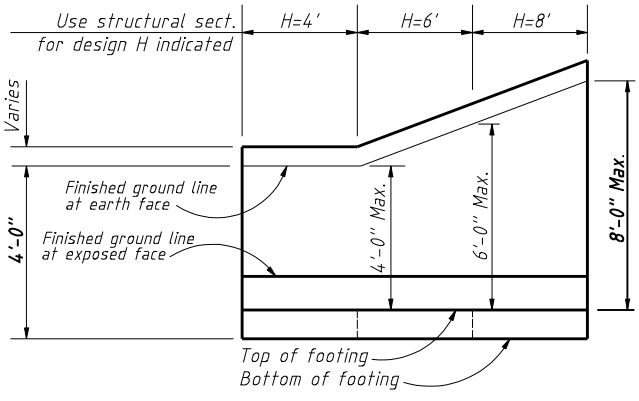
STANDARD PLAN

601-36

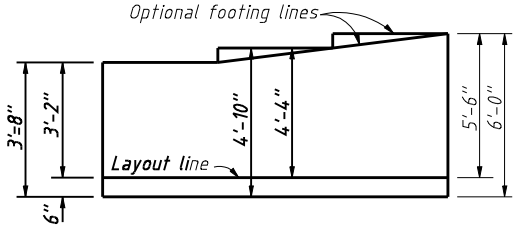
SHEET 1 OF 2



SECTION



ELEVATION



PLAN

TYPICAL LAYOUT EXAMPLE

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 5

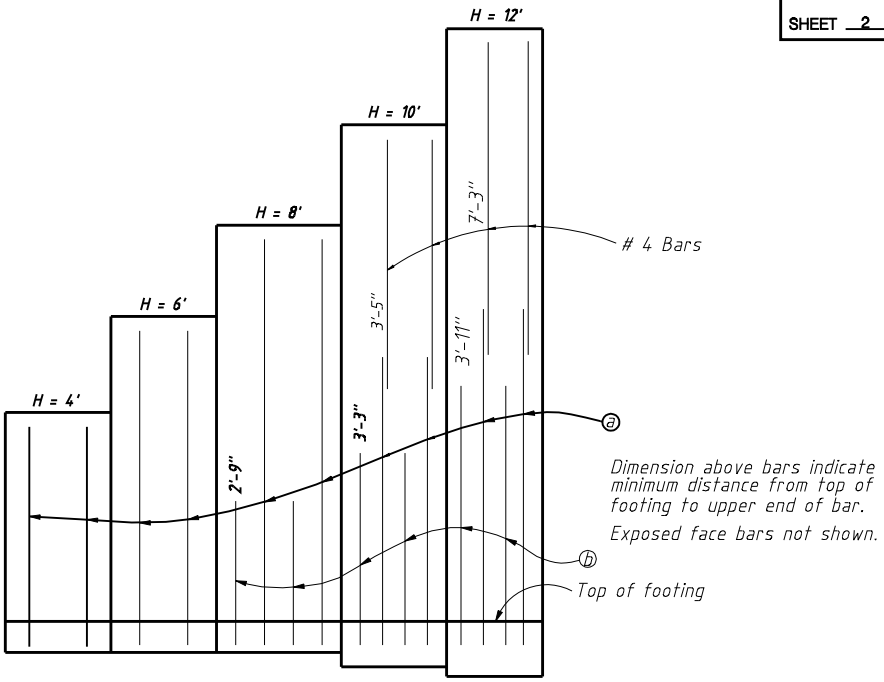
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

601–37

SHEET 2 OF 2



PLACEMENT OF VERTICAL REINFORCEMENT

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA

	CASE I					CASE II				
	LEVEL BACKFIL + 2' SURCHARGE OR 2:1 BACKFILL					1- 1/2:1 BACKFILL				
DESIGN H	4'	6'	8'	10'	12'	4'	6'	8'	10'	12'
W	3'-8"	4'-10"	6'-0"	7'-2"	8'-4"	3'-8"	5'-8"	7'-11"	10'-3"	12'-8"
F	0'-10"	0'-10"	0'-10"	0'-10"	1'-0"	0'-10"	0'-10"	0'-11"	1'-0"	1'-2"
C	2'-4"	3'-6"	4'-8"	5'-10"	6'-10"	2'-4"	4'-4"	6'-7"	8'-10"	11'-1"
T	0'-10"	0'-10"	0'-10"	0'-10"	1'-0"	0'-10"	0'-10"	0'-10"	0'-11"	1'-1"
BAR ⓐ	4 @ 18	4 @ 12	5 @ 18	6 @ 14	7 @ 14.5	4 @ 18	4 @ 12	4 @ 10.5	6 @ 12.5	7 @ 13
BAR ⓑ			5 @ 18	6 @ 14	7 @ 14.5			4 @ 10.5	6 @ 12.5	7 @ 13
BAR ⓒ	4 @ 18	4 @ 11.5	6 @ 12	8 @ 12	8 @ 9	4 @ 18	4 @ 18	4 @ 9	6 @ 10.5	7 @ 9.5
SOIL PRES., psf.	1110	1580	2040	2500	3050	1480	2220	3120	4120	5170

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 5

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

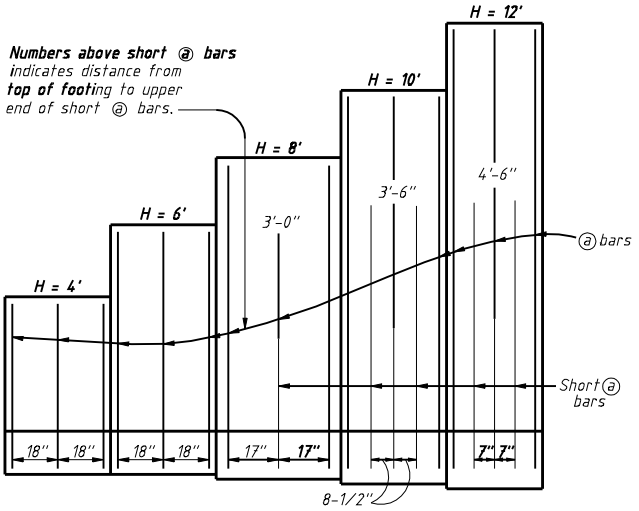
STANDARD PLAN

601-38

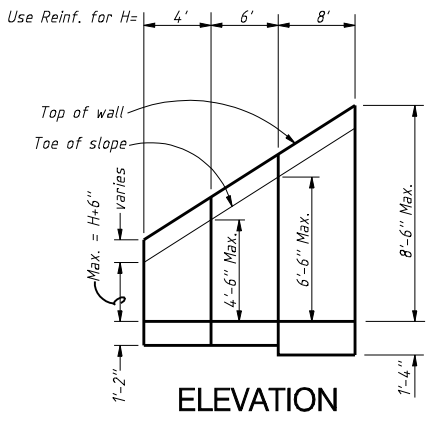
SHEET 1 OF 1

TABLE OF REINFORCING STEEL DIMENSIONS AND DATA

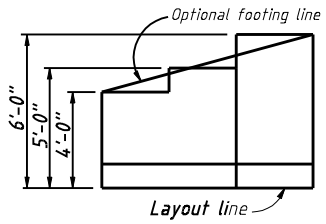
Design H FT.		4'	6'	8'	10'	12'
W		4'-0"	5'-0"	6'-6"	8'-0"	9'-6"
F Spread footing		1'-2"	1'-2"	1'-4"	1'-6"	1'-10"
Batter		None	None	None	3/8:12	3/4:12
ⓐ bars		#4@18	#5@18	#5@17	#6@17	#6@14
Short ⓐ bars		None	None	#5@17	#6@17	#6@14
ⓑ		#4@18	#5@18	#5@17	#6@8-1/2	#6@7
Total ⓔ		6 - #7	6 - #7	8 - #7	6 - #7	4 - #7
Toe Pressure	Case I	1600	2200	2500	3000	3500
	Case II	1500	2100	2700	3400	4100
	Case III	1600	2300	2900	3800	4400
	Case IV	2000	3200	4200	5300	6500
Spread Footing	Steel lbs./ft.	16	22	35	55	73
	Conc. cf./ft.	9.4	12.5	17.2	24.4	36.1



ELEVATION

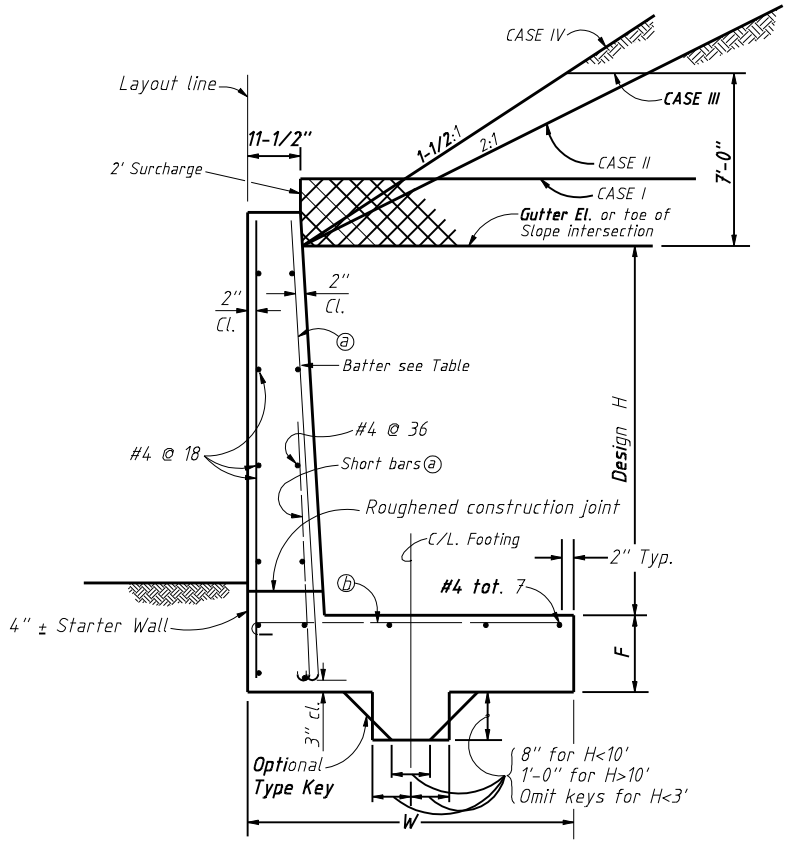


ELEVATION



PLAN

TYPICAL LAYOUT EXAMPLE



SECTION

NOTE :
For Design Data, Details and Notes See Standard Plan 717-0

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 6

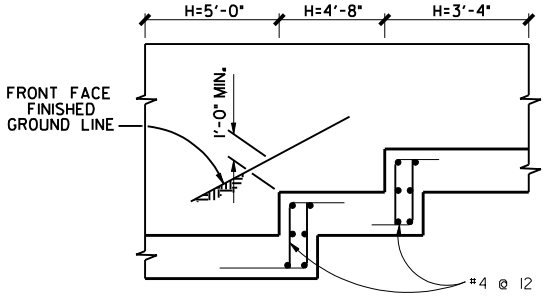
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

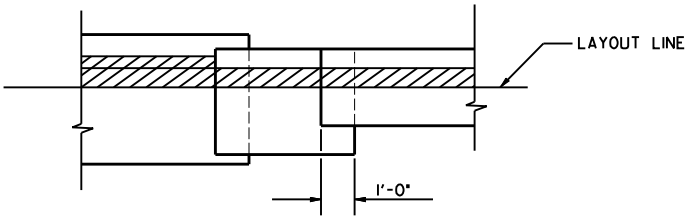
STANDARD PLAN

601-39

SHEET 1 OF 1

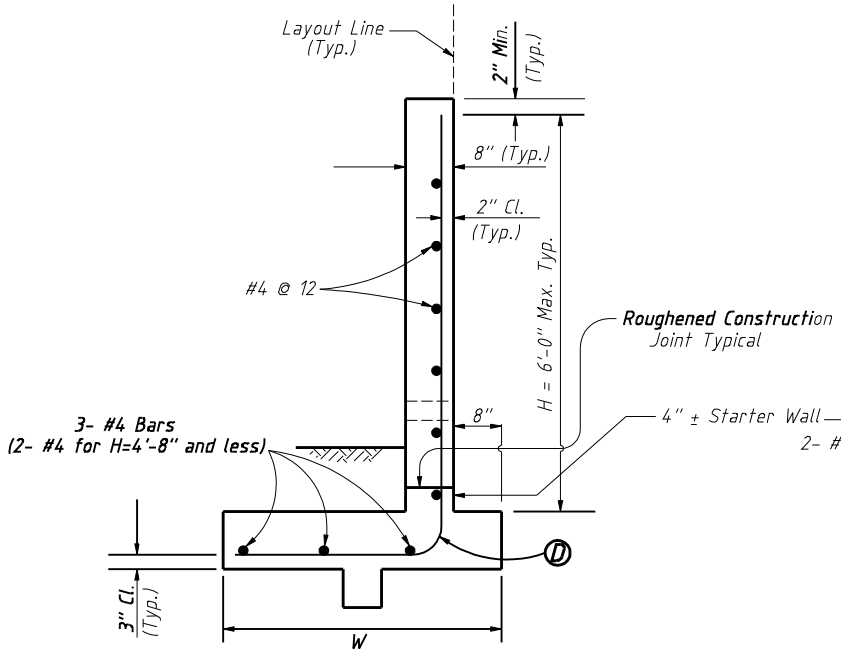


ELEVATION

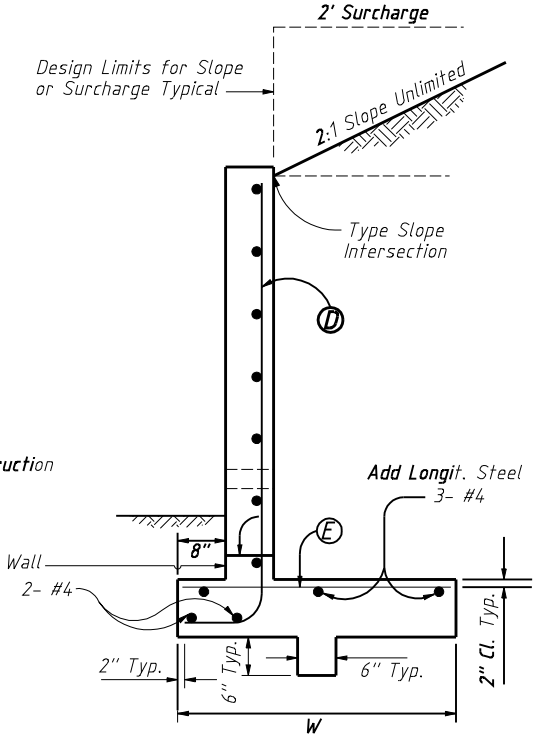


PLAN

FOTTING STEP DETAILS



TYPE 7A WALL



TYPE 7B WALL

WALL DATA TYPE 7A						
Type	Design H	3'-4"	4'-0"	4'-8"	5'-4"	6'-0"
7 A	W	3'-2"	3'-6"	3'-10"	4'-2"	4'-6"
7 A	Ⓓ	#4 @ 18	#4 @ 18	#4 @ 14	#4 @ 10	#5 @ 12
Footing conc. Cu. ft. / L.F.		2.9	3.2	3.4	3.7	4.0
Reinf. Lbs./LF.		6.6	7.7	9.8	13.7	16.7

WALL DATA TYPE 7B						
Type	Design H	3'-4"	4'-0"	4'-8"	5'-4"	6'-0"
7 B	W	2'-8"	3'-0"	3'-4"	3'-8"	4'-0"
7 B	Ⓓ	#4 @ 16	#4 @ 16	#5 @ 16	#5 @ 16	#4 @ 8
7 B	Ⓔ	#4 @ 16	#4 @ 16	#4 @ 16	#4 @ 16	#5 @ 16
Footing conc. Cu. ft. / L.F.		2.5	2.8	3.0	3.3	3.6
Reinf. Lbs./LF.		6.6	7.7	9.8	13.7	16.7

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

REINFORCED CONCRETE RETAINING WALL TYPE 7

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

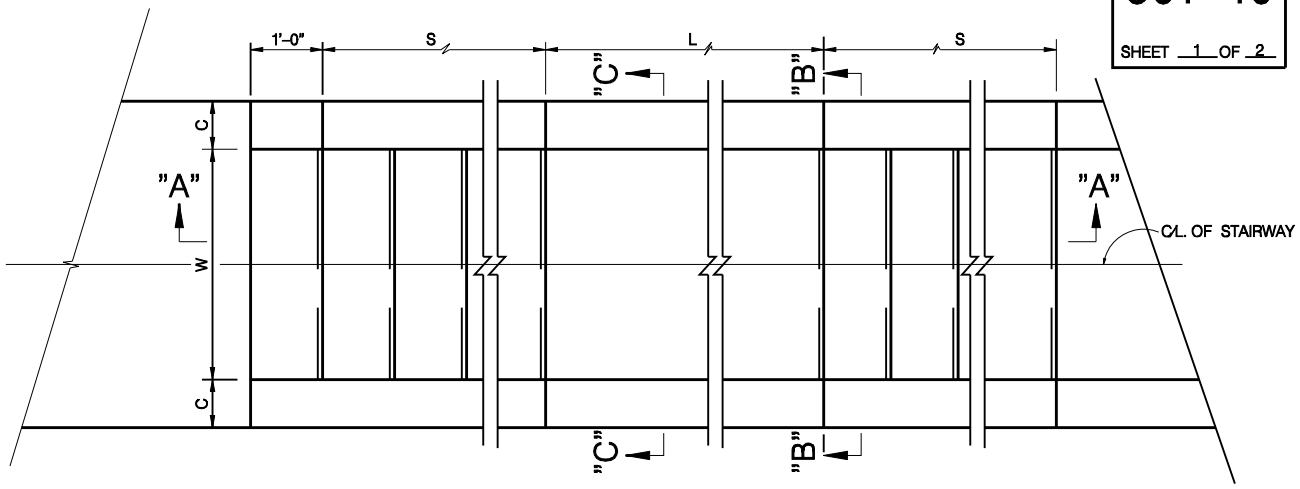
CHECKED: AZ.

APPROVED: REW

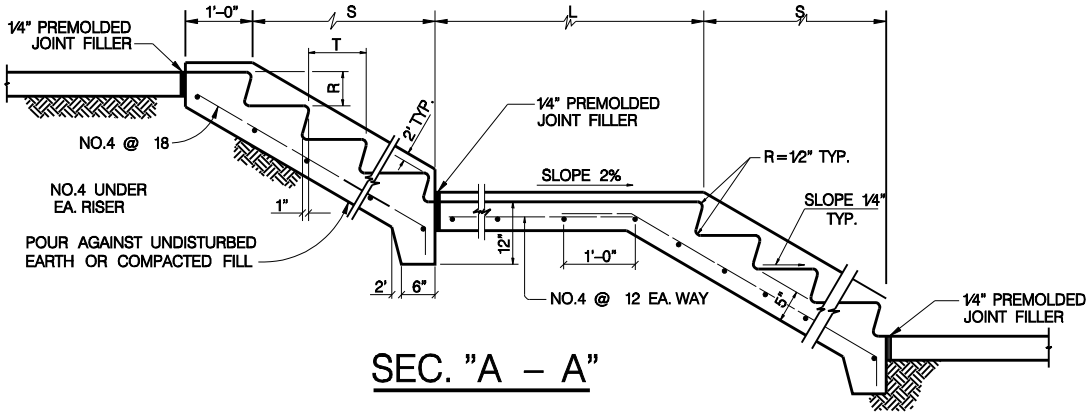
STANDARD PLAN

601–40

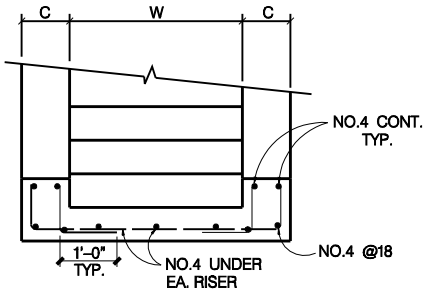
SHEET 1 OF 2



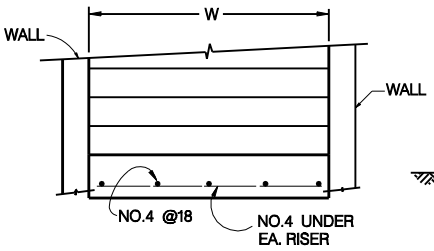
PLAN



SEC. "A – A"

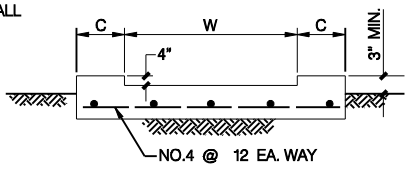


TYPE A



TYPE B

SEC. "B – B"



SEC. "C – C"

CITY OF SHREVEPORT

REINFORCE CONCRETE STAIRWAY

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED:

STANDARD PLAN

601–41

SHEET 2 OF 2

NOTES :

1. SEE PROJECT PLAN FOR HANDRAIL DETAILS OR STANDARD PLAN 702–0

2. SEE THE PROJECT PLANS FOR THE FOLLOWING INFORMATION :
   a. TYPE OF STAIRWAY AND LOCATION
   b. W = WIDTH OF STAIRWAY
   c. L = LENGTH OF LANDINGS
   d. T = LENGTH OF TREAD
   e. R = LENGTH OF RISER
   f. C = WIDTH OF CURB
   g. S = LENGTH OF STAIRWAY FLIGHT

3. CONCRETE FINISH FOR EXPOSED SURFACES SHALL BE CLASS I, EXCEPT THAT TREADS AND LANDINGS SHALL BE TROWELED SMOOTH AND GIVEN A FINE BROOM FINISH IN A DIRECTION PERPENDICULAR TO THE CENTER LINE OF THE STAIRWAY. THE BROOM FINISH SHALL BE BROUGHT TO THE NOSE OF TH TREADS AND LANDINGS.

4. TWO HANDRAILS ARE REQUIRED UNLESS OTHERWISE NOTED ON THE PROJECT PLANS, OR UNLESS THE STAIRWAY IS NOT OVER 4 FEET WIDE IN WHICH CASE ONE HANDRAIL IS REQUIRED.

CITY OF SHREVEPORT

REINFORCEDD CONCRETE STAIRWAY

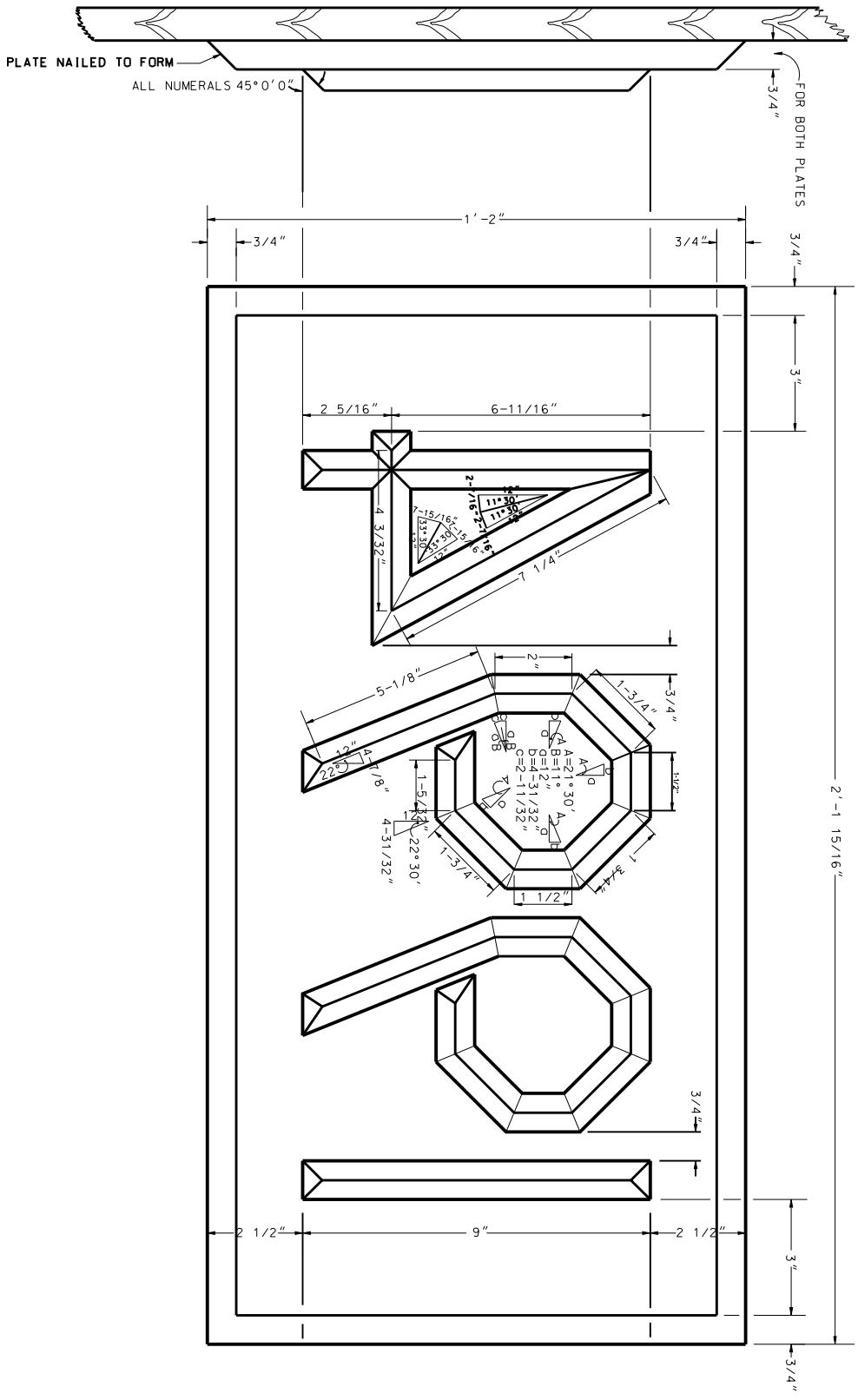
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED:
REVISED:

STANDARD PLAN

601-42

SHEET 1 OF 2



YEAR PLATE

DIMENSIONS SHOWN ARE FOR LARGE PLATE, USE ONE HALF (1/2) ABOVE DIMENSIONS FOR SMALL PLATES.

YEAR PLATE TO CORRESPOND TO YEAR IN WHICH STRUCTURE IS COMPLETED.

* STRUCTURE NUMBER AND RECALL NUMBER TO BE PROVIDED BY PROJECT ENGINEER AND MANUFACTURED SAME AS YEAR PLATE.

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

STANDARD YEAR PLATE
(FOR CONCRETE STRUCTURES)

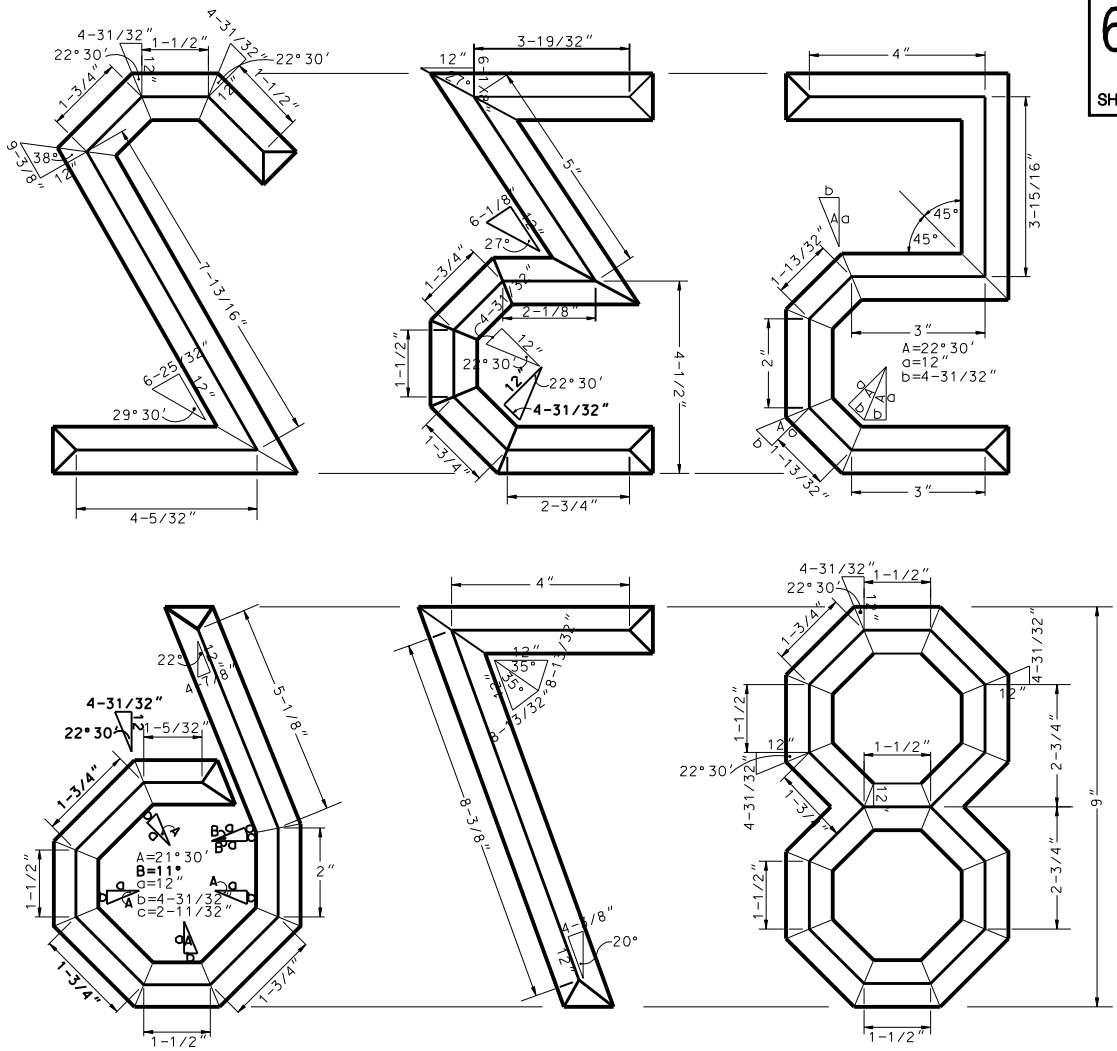
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

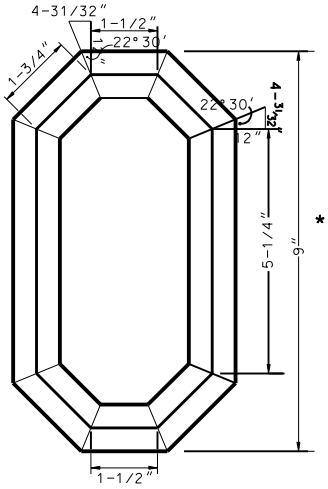
DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

601-43

SHEET 2 OF 2





NOTE :

FIGURE DETAILS ARE HALF SCALE FOR LARGE YEAR PLATE.

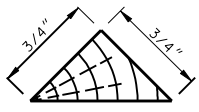
FIGURE DETAILS ARE FULL SCALE FOR SMALL YEAR PLATE.

DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.

USE 1/2" DIMENSIONS SHOWN FOR SMALL YEAR PLATE.

* FOR DRAINAGE STRUCTURE THAT SPANS MORE THAN 18 FT., A STRUCTURE NUMBER AND RECALL NUMBER IS REQUIRED IN ADDITION TO YEAR PLATE.

FULL SIZE CROSS SECTION OF 3/8" CHAMFER STRIP TO BE USED IN CONSTRUCTING ALL LETTER FOR SMALL YEAR PLATE



FULL SIZE CROSS SECTION OF 3/4" CHAMFER STRIP TO BE USED IN CONSTRUCTING ALL LETTER FOR LARGE YEAR PLATE

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

STANDARD YEAR PLATE (FOR CONCRETE STRUCTURES)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

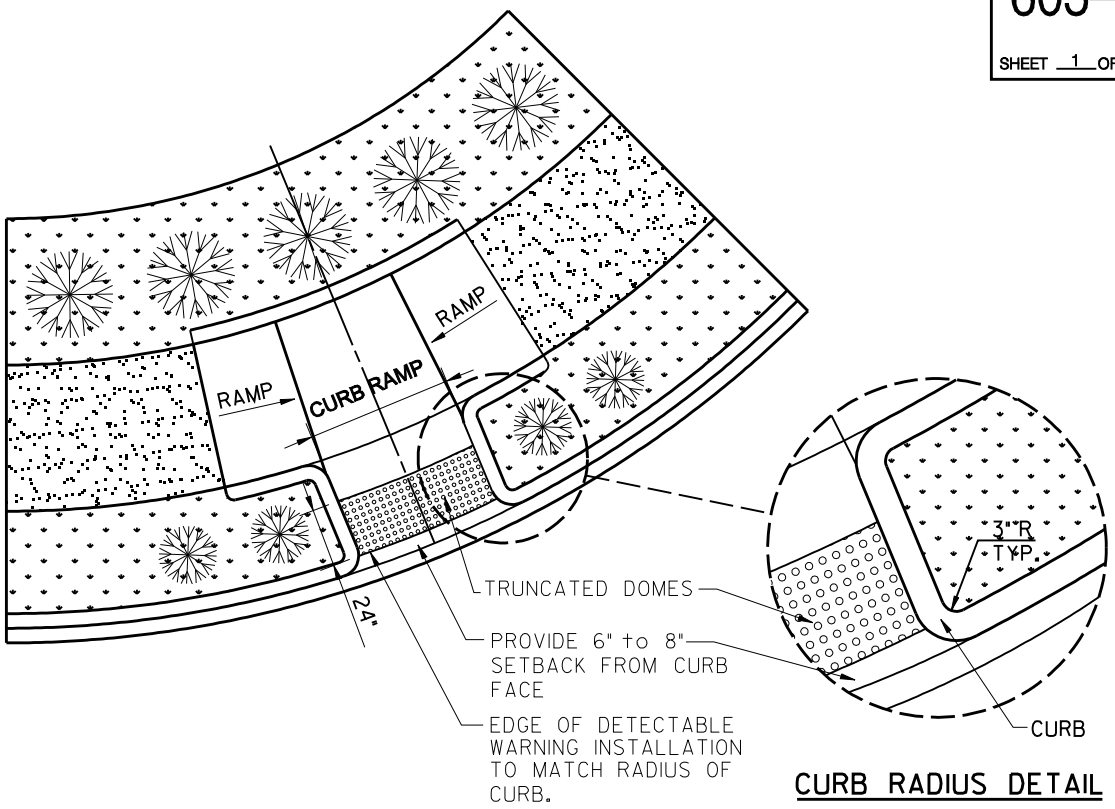
APPROVED: REW

REVISED:

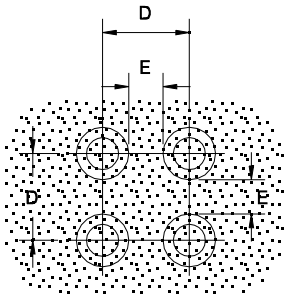
STANDARD PLAN

605–6

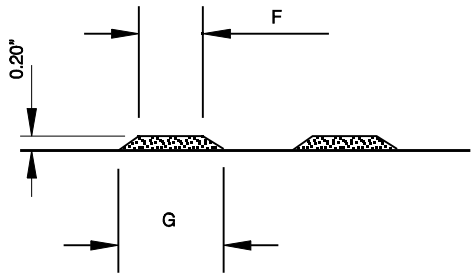
SHEET 1 OF 7



CURB RADIUS DETAIL



PLAN



ELEVATION

	MIN.	MAX.
D	1.60"	2.40"
E	.65"	1.50"
F	.45"	.80"
G	.90"	1.40"

TRUNCATED DOME
DETECTABLE
WARNING DETAIL

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

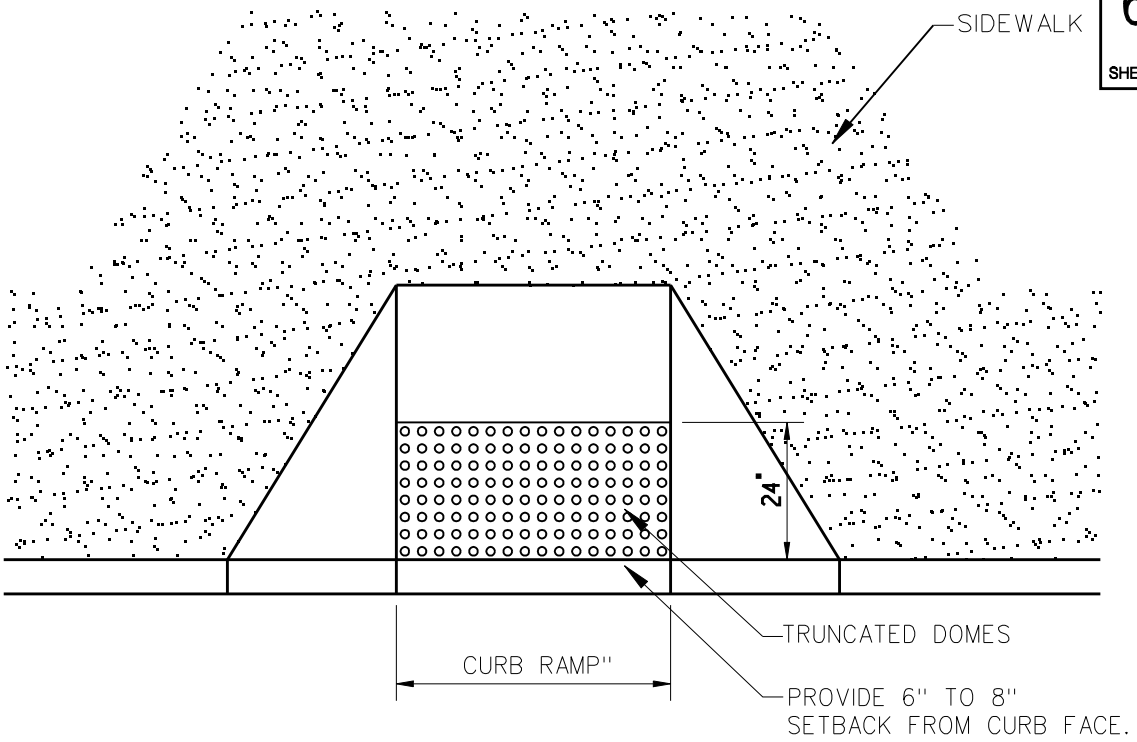
CITY OF SHREVEPORT
CURB RAMP
WITH DETECTABLE WARNINGS
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

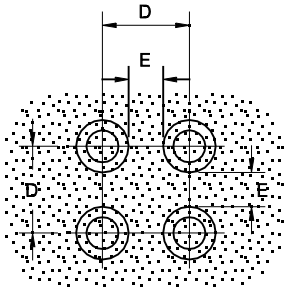
DRAWN: N. TRAN
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

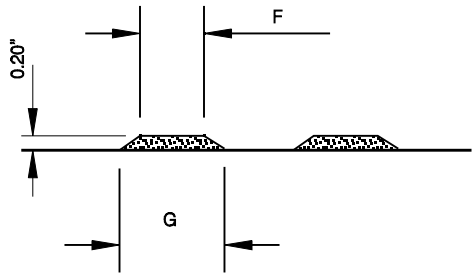
605-7

SHEET 2 OF 7





PLAN



ELEVATION

	MIN.	MAX.
D	1.60"	2.40"
E	.65"	1.50"
F	.45"	.80"
G	.90"	1.40"

TRUNCATED DOME DETECTABLE WARNING DETAIL

Truncated domes and all related installed surfaces to be installed according to manufacturers specifications. All detectable warning surface installations shall be at minimum, at least as non skid as the surrounding pedestrian surfaces.

As manufactured by Vanguard ADA Systems of America, or equivalent.
www.VanguardOnline.com

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

DETECTABLE WARNING AT CURB RAMP

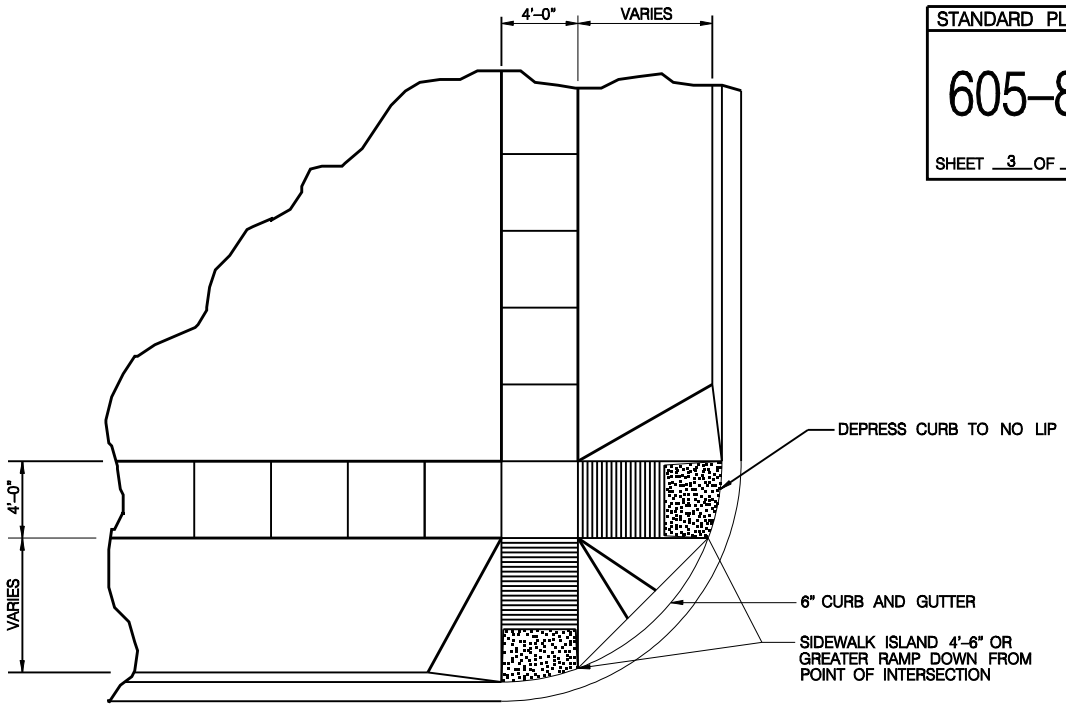
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: N. TRAN
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

605–8

SHEET 3 OF 7

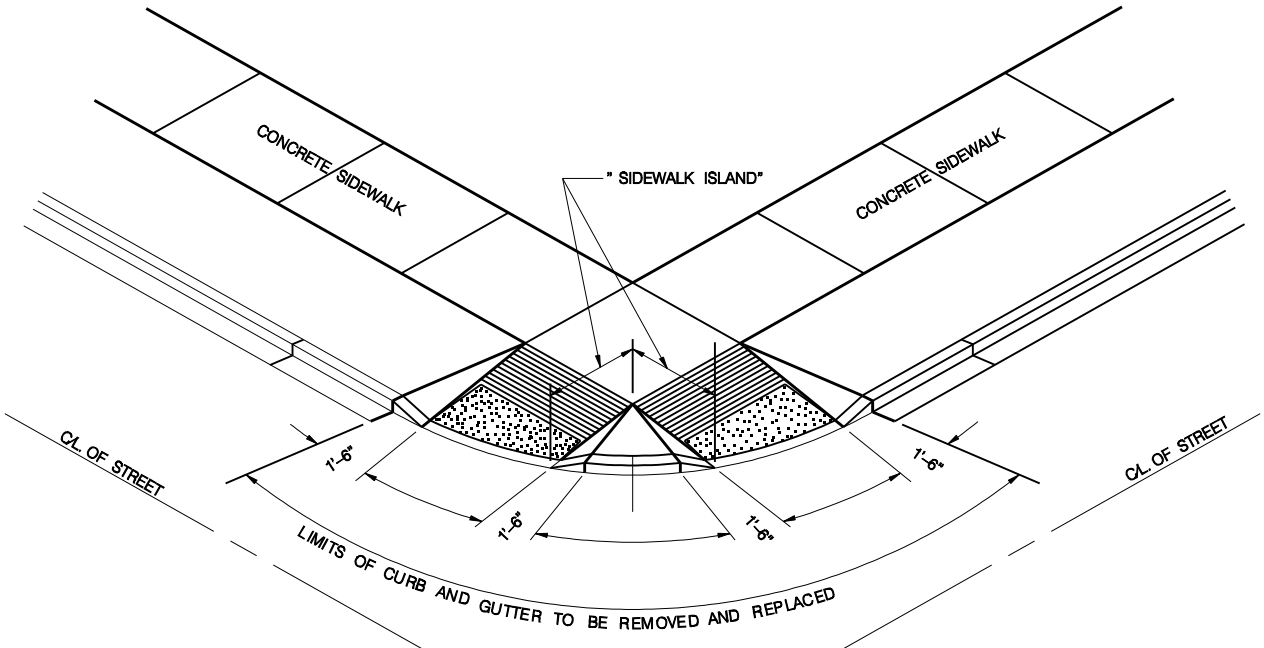


P L A N

NOTES : 1. DETERMINATION OF RAMPING OF SIDEWALKS SHALL BE AS DIRECTED BY THE ENGINEER.

2. IF SIDEWALK ISLAND IS GREATER THAN 4'–6" USE THIS PLAN, IF LESS THAN 4'–6" USE STANDARD PLAN (SEE SHEET NO. 2)

3. FOR RAMP TYPICAL SECTION DETAIL SEE SHEET NO. 3.



ISOMETRIC VIEW

CITY OF SHREVEPORT

TYPICAL HANDICAP CURB RAMP

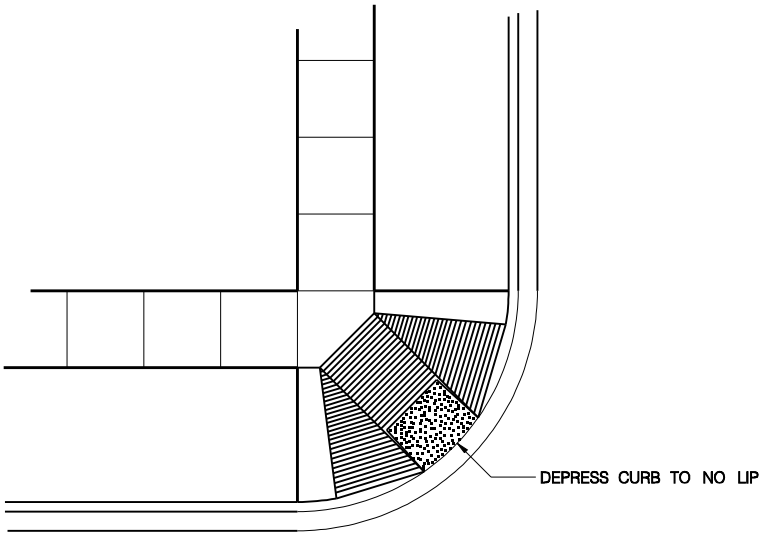
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

605–9

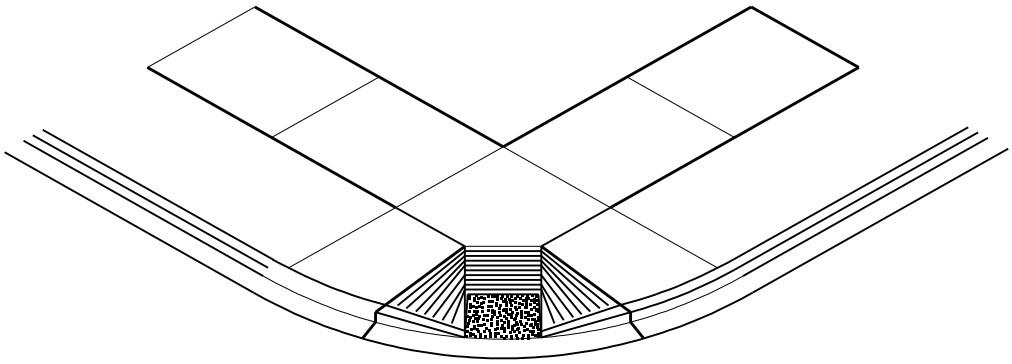
SHEET 4 OF 7



P L A N

NOTES : 1. TRANSITIONS FROM RAMPS TO WALKS, GUTTER OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

2. FOR RAMP TYPICAL SECTION SEE SHEET NO.4.



ISOMETRIC VIEW

CITY OF SHREVEPORT

TYPICAL HANDICAP CURB RAMP

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

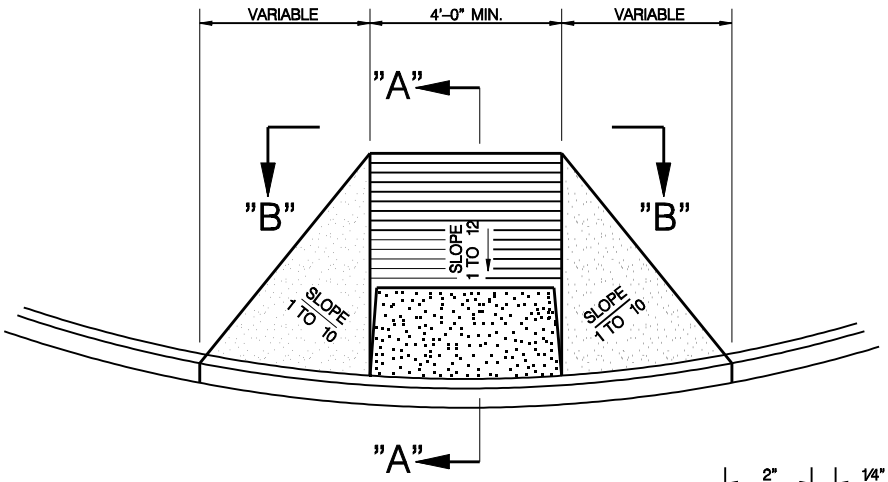
APPROVED: REW

REVISED:

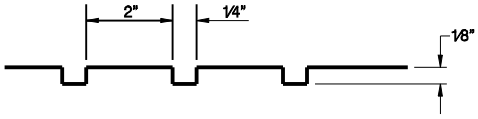
STANDARD PLAN

605–10

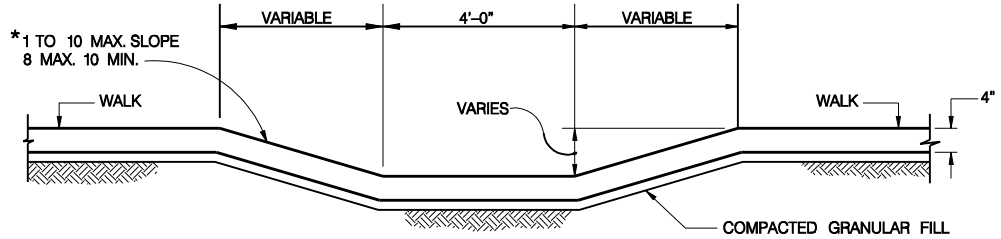
SHEET 5 OF 7



P L A N

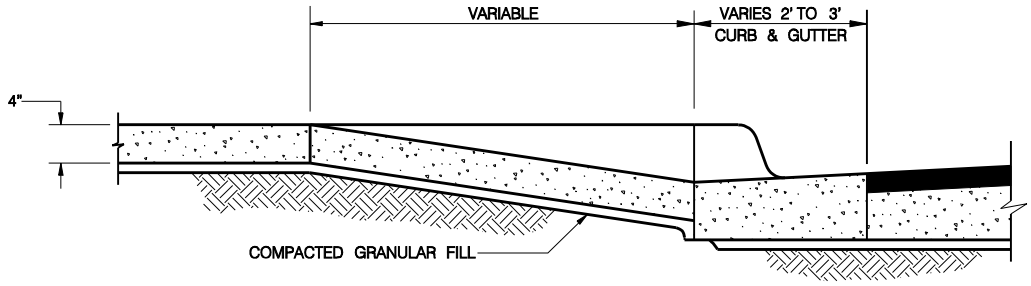


TACTILE WARNING SIGNAL
(T.W.S.)



*NOTE : WHERE SIDEWALK LANE OF TRAVEL IS ALONG THE SIDE OF THE RAMP, THE WING SLOPE SHALL DECREASE TO 1:12 MAX.

SECTION "B – B"



NOTE : TRANSITIONS FROM RAMPS TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES

SECTION "A – A"

CITY OF SHREVEPORT

TYPICAL HANDICAP CURB RAMP

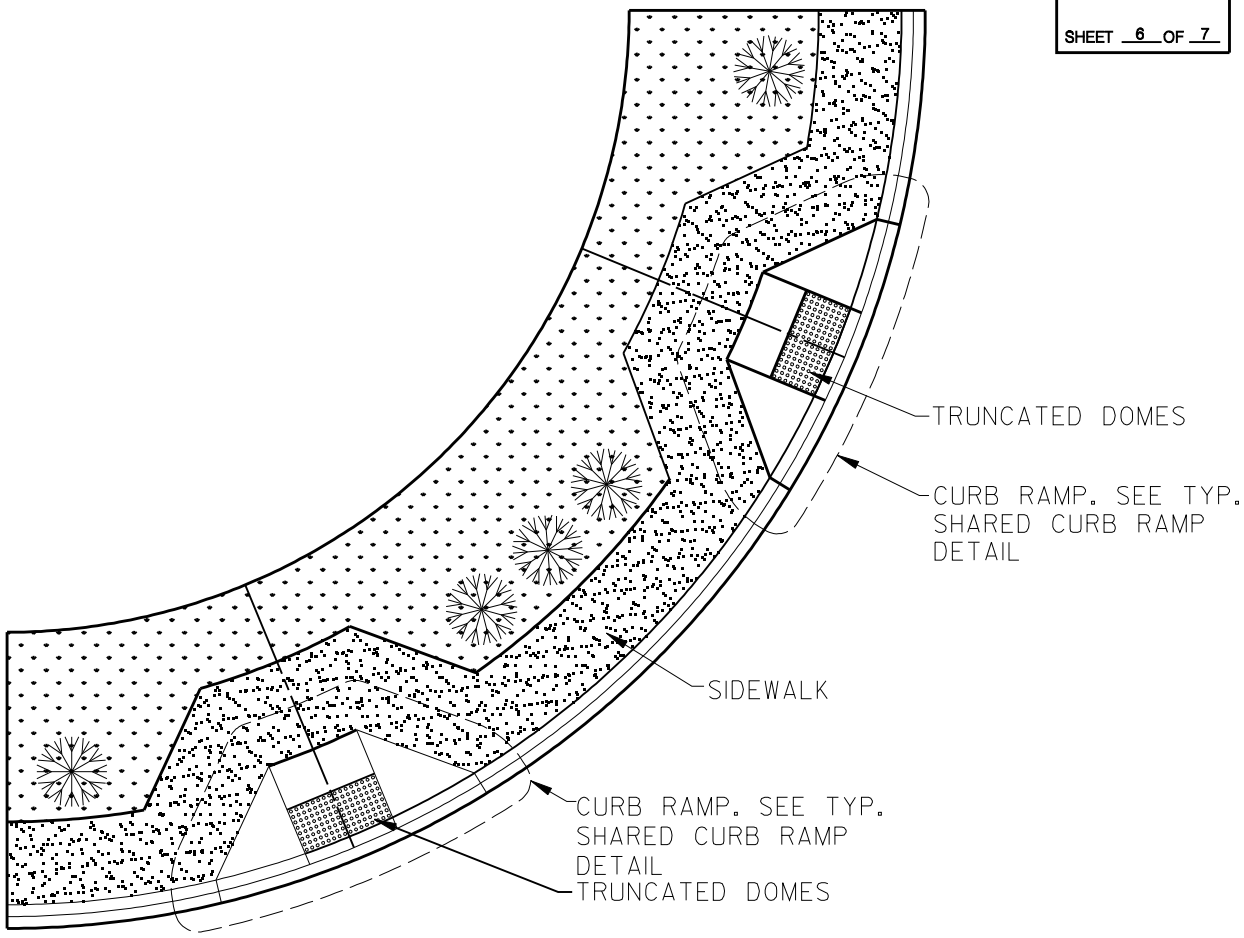
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

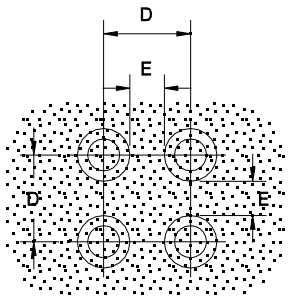
DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

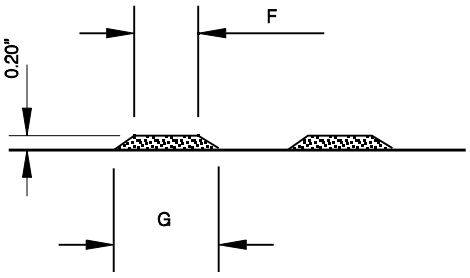
605–11

SHEET 6 OF 7





PLAN



ELEVATION

	MIN.	MAX.
D	1.60"	2.40"
E	.65"	1.50"
F	.45"	.80"
G	.90"	1.40"

TRUNCATED DOME
DETECTABLE
WARNING DETAIL

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

PERPENDICULAR RAMPS ON CORNER WITH DETECTABLE WARNINGS

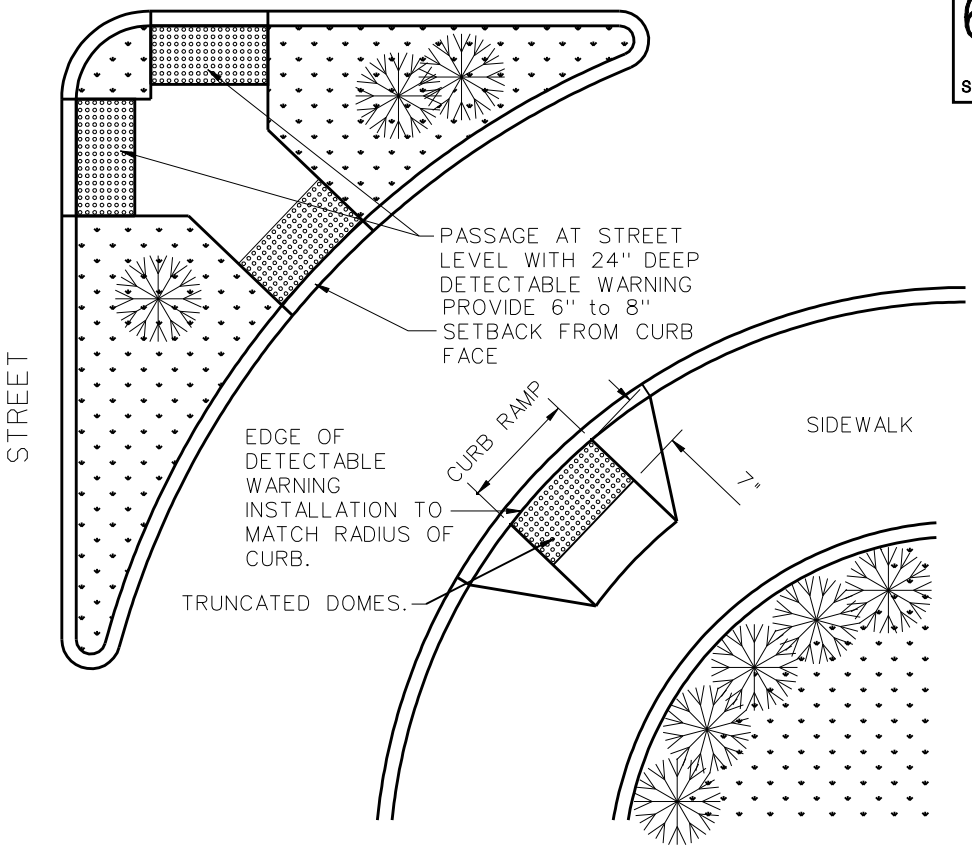
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

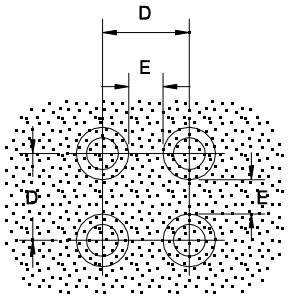
DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

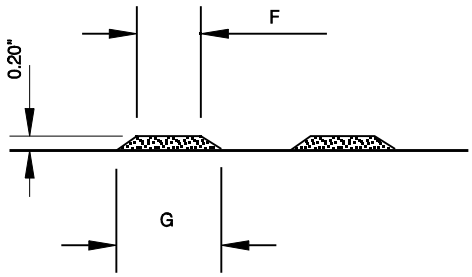
605–12

SHEET 7 OF 7





PLAN



ELEVATION

	MIN.	MAX.
D	1.60"	2.40"
E	.65"	1.50"
F	.45"	.80"
G	.90"	1.40"

TRUNCATED DOME
DETECTABLE
WARNING DETAIL

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

REFUGE ISLAND WITH DETECTABLE WARNINGS

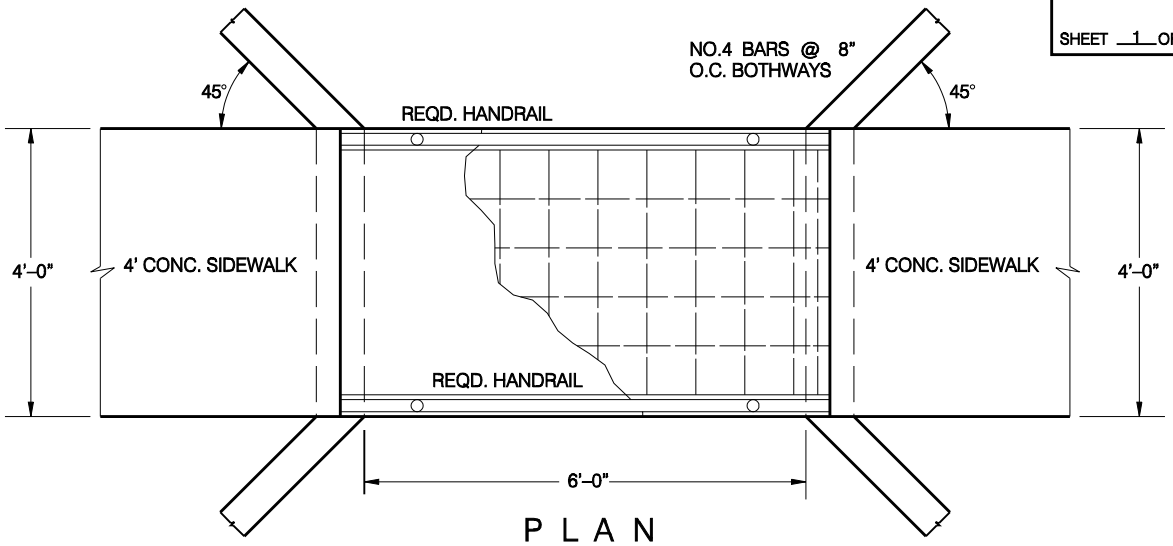
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

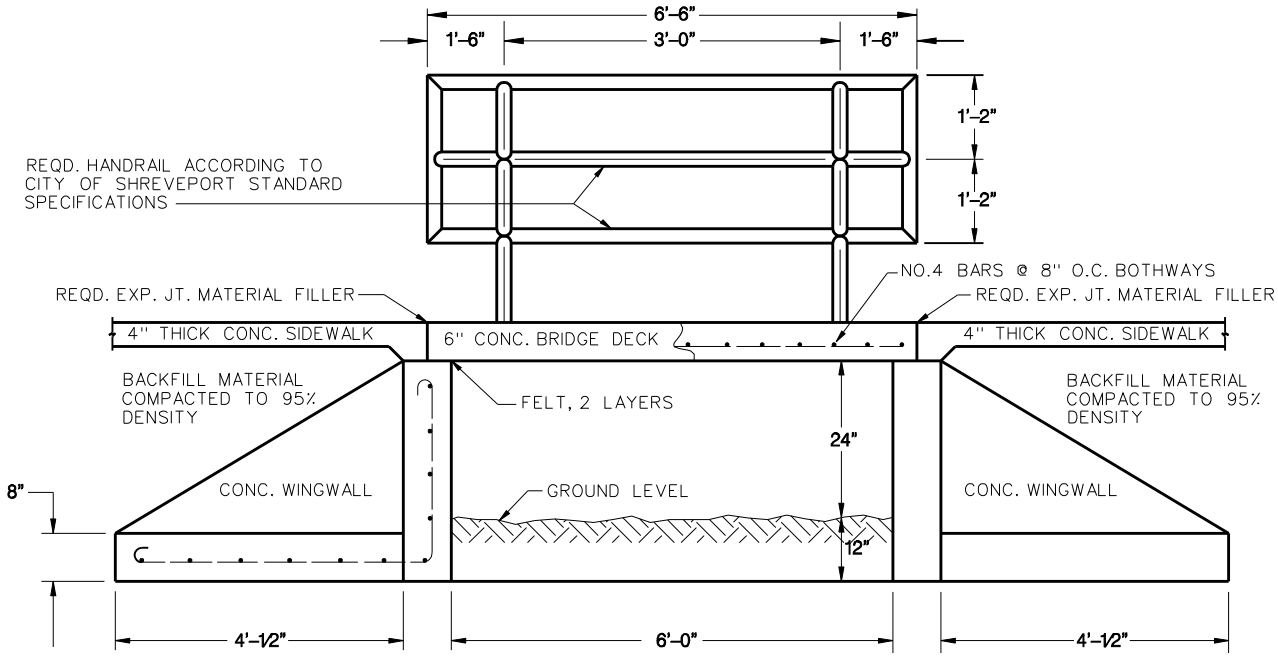
605–13

SHEET 1 OF 1



PLAN

NOT TO SCALE



ELEVATION

NOT TO SCALE

CITY OF SHREVEPORT

CONCRETE SIDEWALK BRIDGE

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

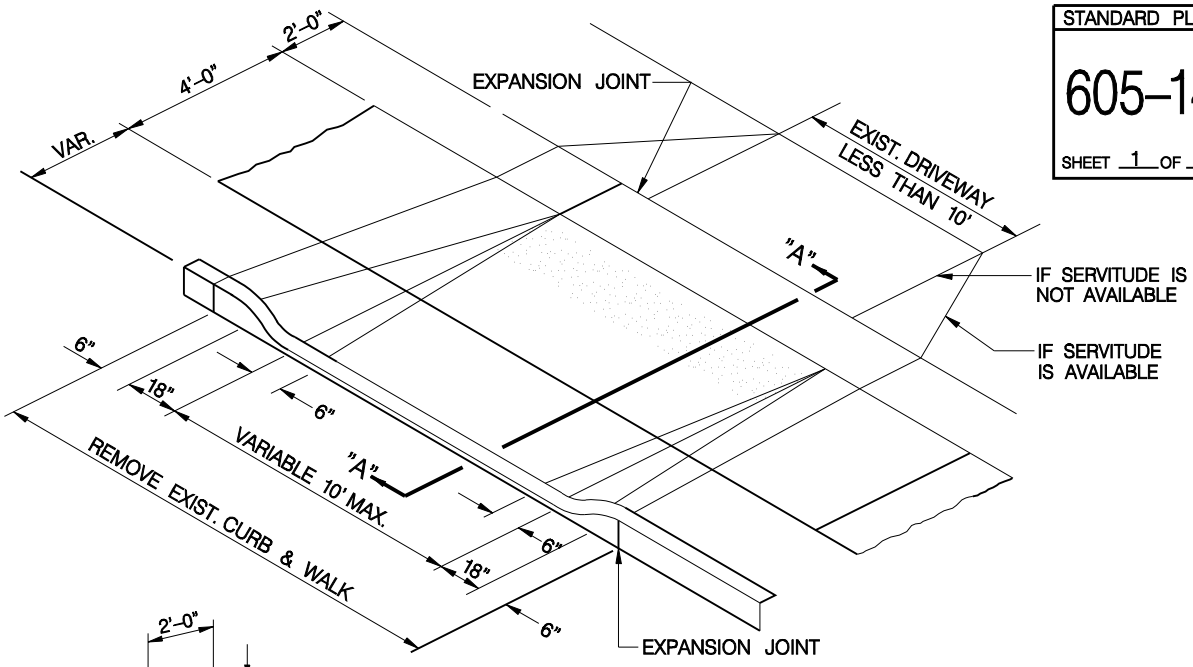
APPROVED: REW

REVISED: _____

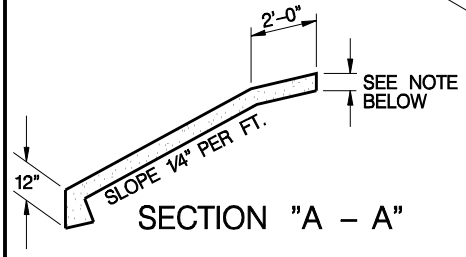
STANDARD PLAN

605–14

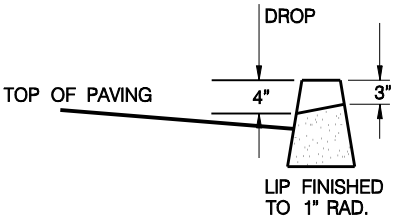
SHEET 1 OF 2

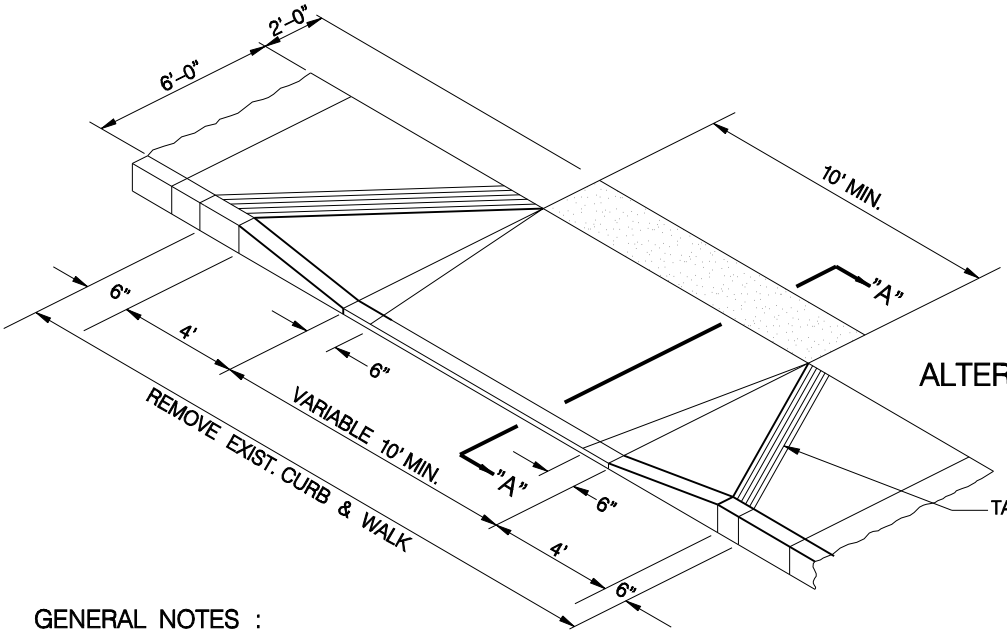


ALTERNATE 1



SECTION "A – A"





ALTERNATE 2

GENERAL NOTES :

JOINTS : WHERE DRIVEWAYS EXCEEDS 16' WIDTH, A 2' DUMMY JOINTS SHALL BE PLACED LONGITUDINALLY ALONG C/L. CLEAN AND EDGE ALL JOINTS. TRANSVERSE DRIVEWAY JOINTS AS SHOWN OR DIRECTED BY THE ENGINEER.

MATERIALS : SHALL MEET SPECIFICATIONS.

CONCRETE : SHALL BE CLASS "A" OR PAVEMENT CLASS IF POURED WITH ROADWAY.

PROCEDURES : FORMS, PLACING, FINISHING AND CURING PER SPECIFICATIONS.

MEASUREMENT : FOR CONCRETE DRIVEWAY THAT AREA PLACED BEHIND STREET CURBING.

CITY OF SHREVEPORT

TYPICAL DRIVEWAY DETAIL

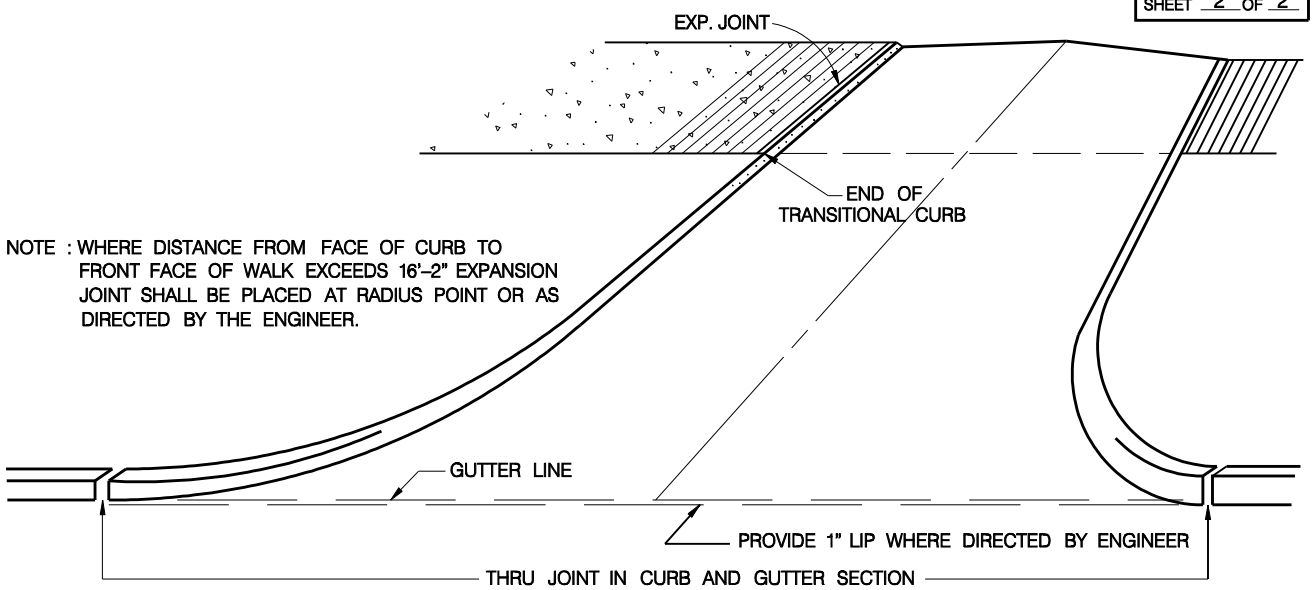
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: R.E.W.
APPROVED: REW
REVISED: DEC. 02

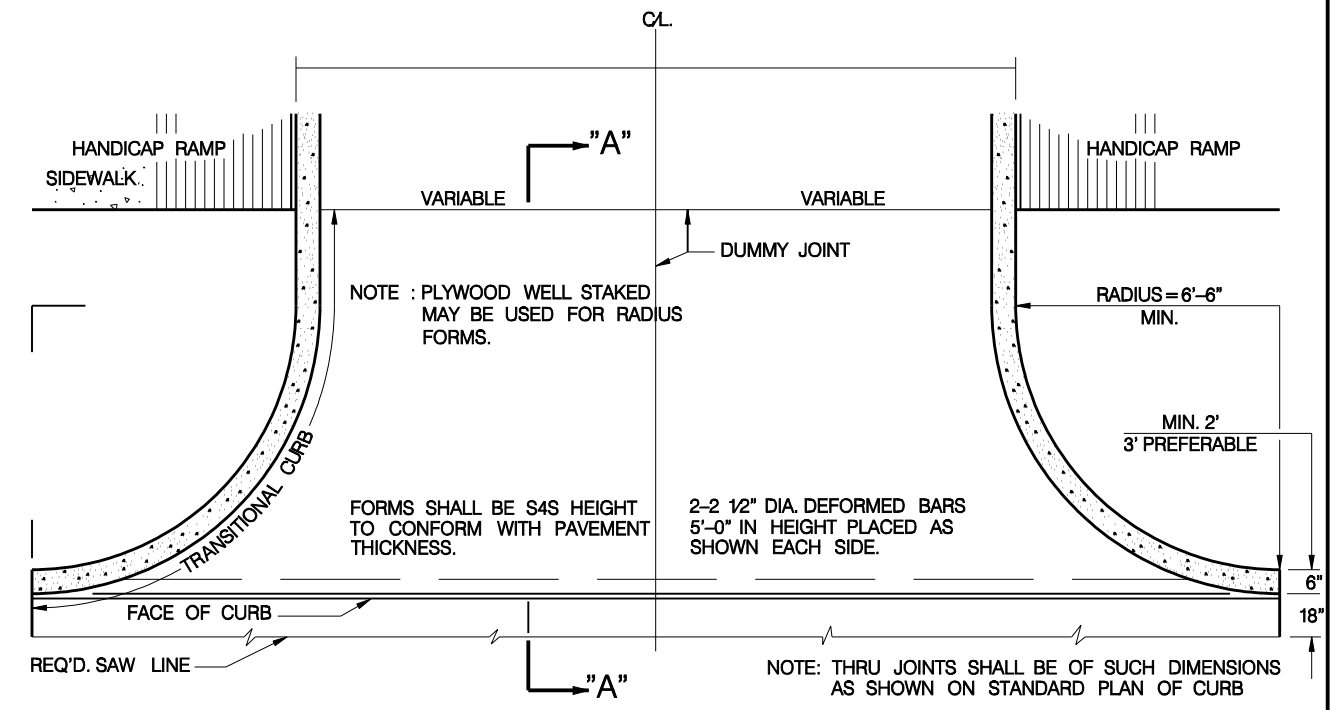
STANDARD PLAN

605–15

SHEET 2 OF 2

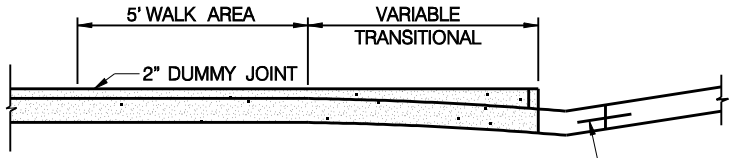


NOTE : WHERE DISTANCE FROM FACE OF CURB TO FRONT FACE OF WALK EXCEEDS 16'–2" EXPANSION JOINT SHALL BE PLACED AT RADIUS POINT OR AS DIRECTED BY THE ENGINEER.



NOTE: THRU JOINTS SHALL BE OF SUCH DIMENSIONS AS SHOWN ON STANDARD PLAN OF CURB

THIS ALLEY RETURN TO BE USED WITH CEMENT CONCRETE PAVEMENT OR CEMENT CONCRETE PAVEMENT WITH ASPHALTIC CONCRETE OVERLAY.



SECTION "A – A"

CITY OF SHREVEPORT

ALLEYS OR DRIVES
PORTLAND CEMENT CONCRETE RETURN

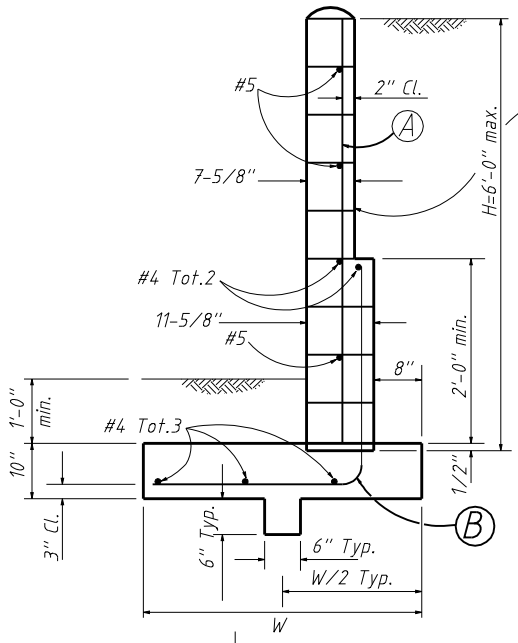
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

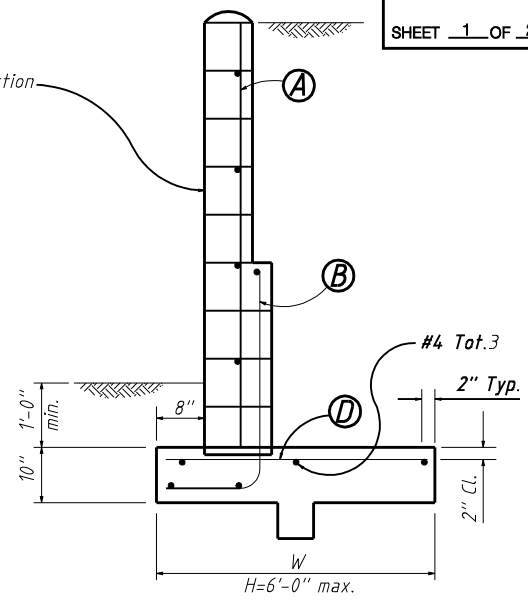
DRAWN: Nhan Tran
CHECKED: R.E.W.
APPROVED: REW
REVISED: DEC. 02

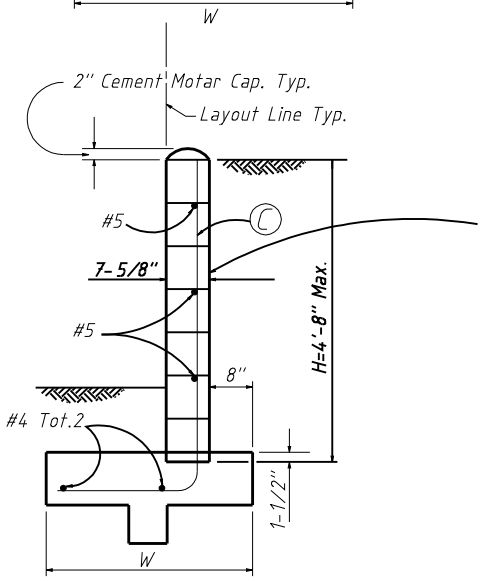
STANDARD PLAN

701-1

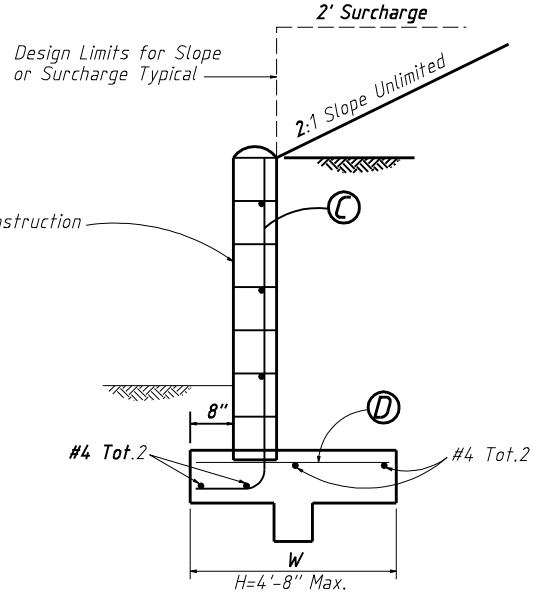
SHEET 1 OF 2







TYPE A WALL



TYPE B WALL

Type	Design H	3'-4"	4'-0"	4'-8"	5'-4"	6'-0"
A	W	3'-2"	3'-6"	3'-10"	4'-2"	4'-6"
A	Ⓐ				#4 @ 16	#4 @ 16
A	Ⓑ				#4 @ 16	#5 @ 16
A	Ⓒ	#4 @ 16	#4 @ 16	#5 @ 16		
Footing conc. Cu. ft. / L.F.		2.9	3.2	3.4	3.7	4.0
Reinf. Lbs./LF.		8.5	8.9	11.6	12.8	15.0

Type	Design H	3'-4"	4'-0"	4'-8"	5'-4"	6'-0"
B	W	2'-8"	3'-0"	3'-4"	3'-8"	4'-0"
B	A				#4 @ 16	#4 @ 16
B	B				#4 @ 16	#5 @ 16
B	C	#4 @ 16	#4 @ 16	#5 @ 16		
B	D	#4 @ 16	#4 @ 16	#4 @ 16	#4 @ 16	#5 @ 16
Footing conc. Cu. ft. / L.F.		2.5	2.8	3.0	3.3	3.6
Reinf. Lbs./LF.		6.6	7.7	9.8	13.7	16.7

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

MASONRY RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED:

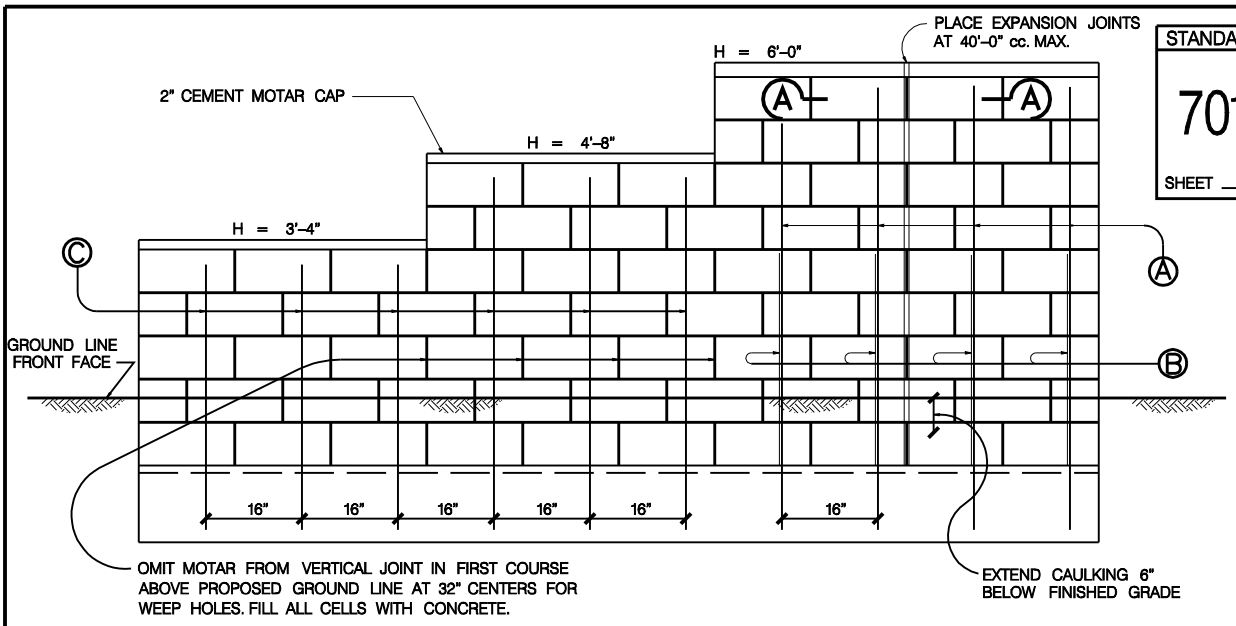
APPROVED: REW

REVISED:

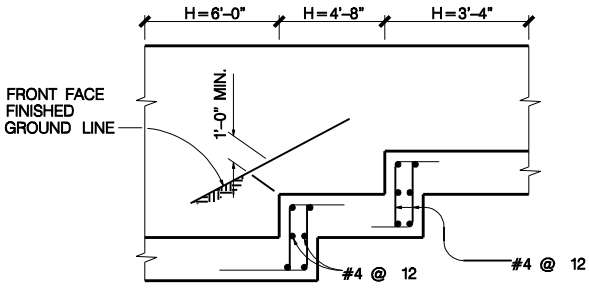
STANDARD PLAN

701–2

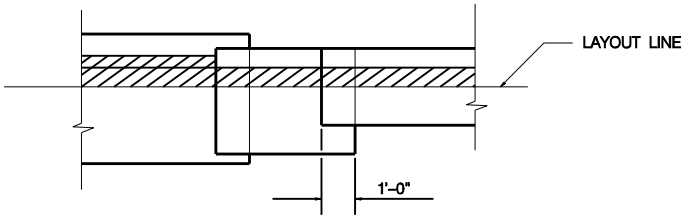
SHEET 2 OF 2



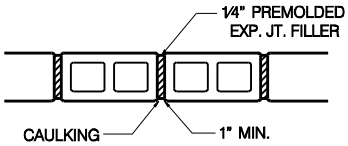
ELEVATION – MASONRY CONSTRUCTION



ELEVATION



P L A N
FOTTING STEP DETAILS



SECTION "A – A"

DESIGN CRITERIA

MASONRY : f_m = 500 P.S.I. f'_m = 1500 P.S.I. f_s = 24,000 P.S.I. n = 20

REINFORCE CONCRETE : f_c = 1300 P.S.I. f'_c = 3800 P.S.I. f_s = 24,000 P.S.I. n = 10

EARTH = 120 PCF.

2" SURCHARGE

EQUIVALENT FLUID PRESURE = 36 PCF. FOR DETERMINATION OF TOE PRESURE.

= 27 PCF. FOR DETERMINATION OF HEEL PRESURE.

2 : 1 UNLIMITED SURCHARGE : EARTH PRESURE DETERMINED FROM RANKINE'S FORMULA 0 = 33°– 42'

MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF FOUNDATION MATERIAL = 200 P.S.I.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

MASONRY RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: _____

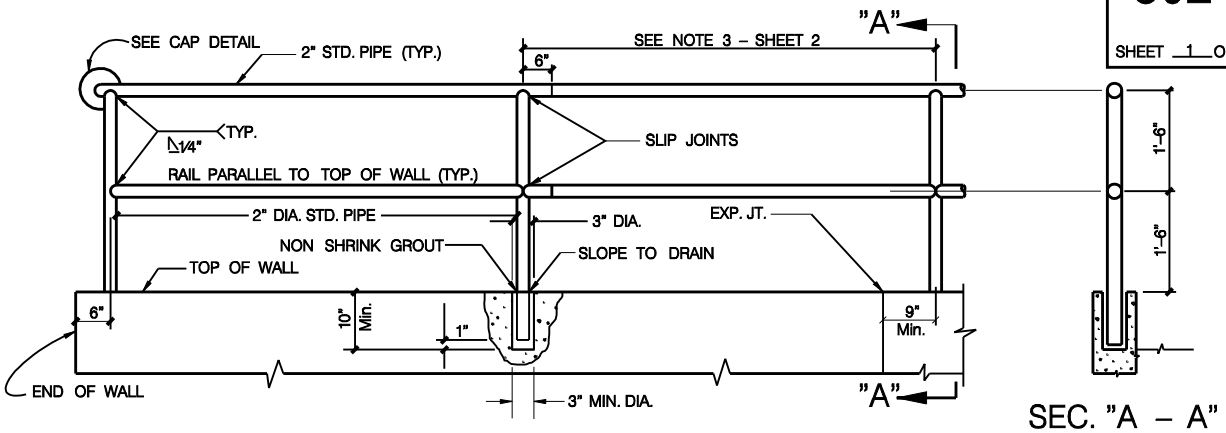
APPROVED: REW

REVISED: _____

STANDARD PLAN

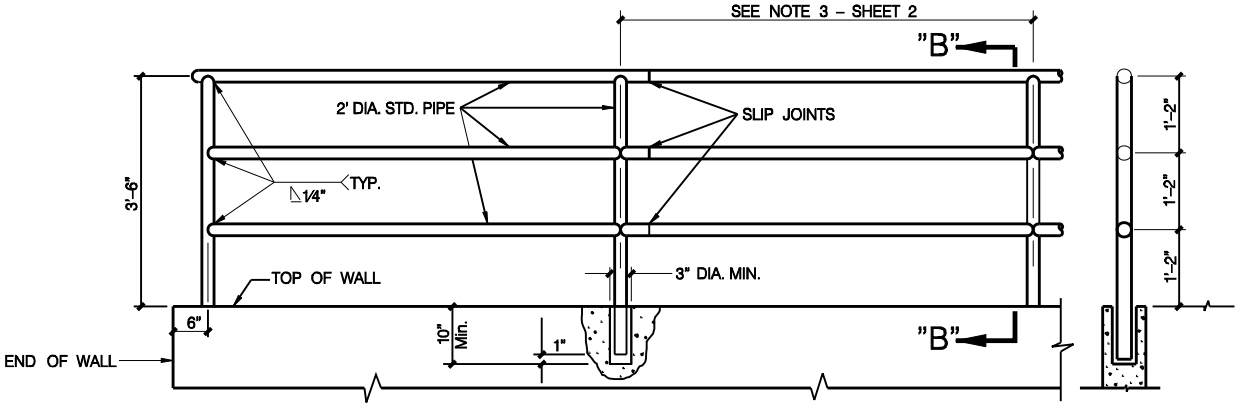
802–1

SHEET 1 OF 2



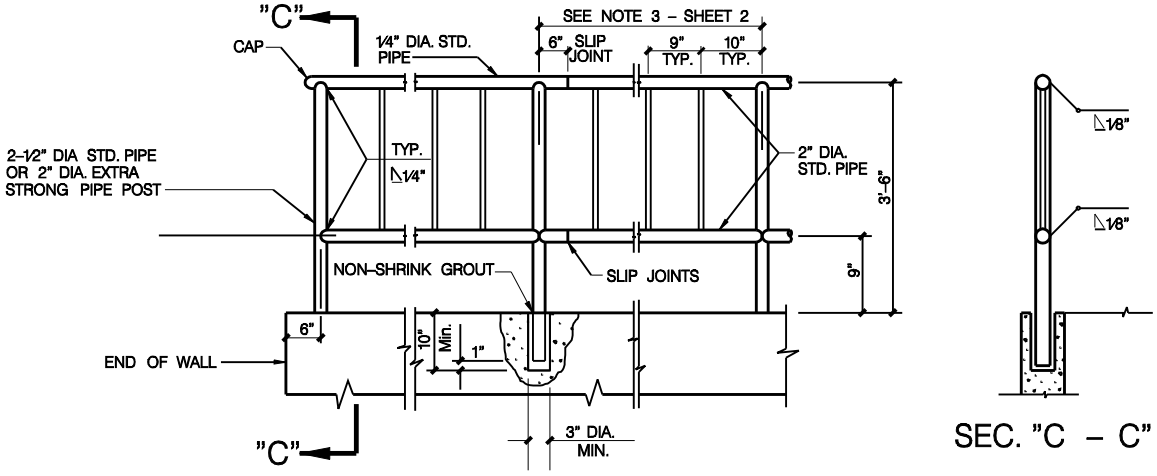
TYPE A

SEC. "A – A"



TYPE B

SEC. "B – B"



TYPE C

SEC. "C – C"

CITY OF SHREVEPORT

METAL HAND RAILING

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

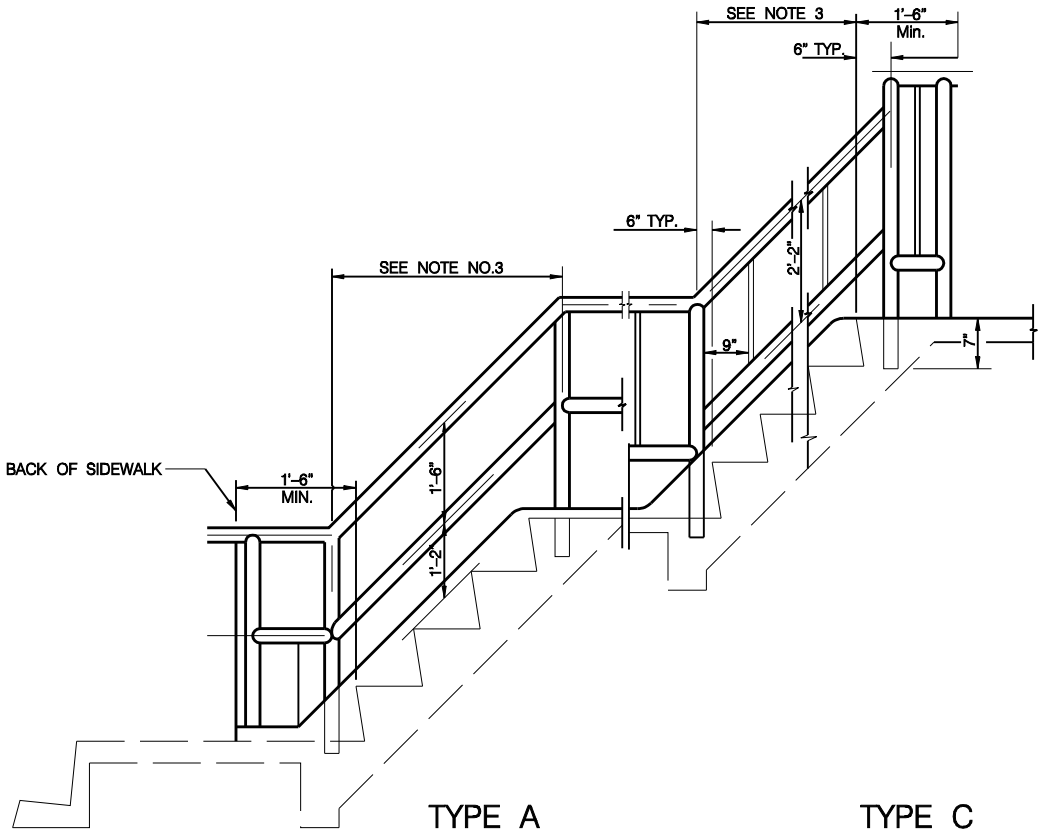
APPROVED: REW

REVISED:

STANDARD PLAN

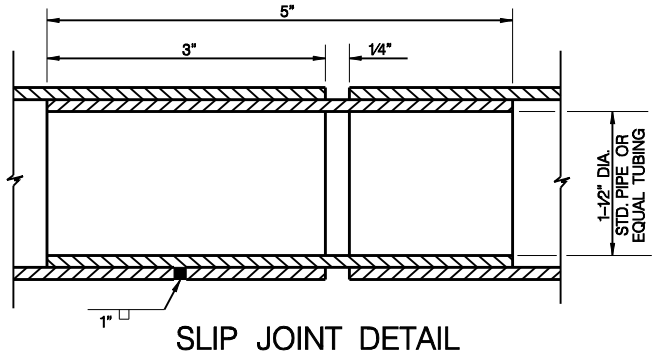
802-2

SHEET 2 OF 2

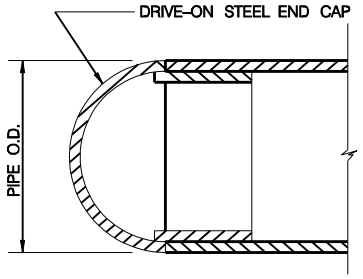


TYPE A TYPE C

HANDRAIL INSTALLATION ON STAIRWAYS



SLIP JOINT DETAIL



CAP DETAIL FOR RAIL END

NOTES :

1. TYPE B OR TYPE C SHALL BE USED WHERE ADJACENT GRADE IS MORE THAN 2'-6" BELOW LANDING OR SIDEWALK FINISHED SURFACE.
2. PROVIDE SLIP JOINTS AT STAIRWAY EXPANSION JOINTS AND AT EVERY 24' O.C. MAXIMUM.
3. MAXIMUM SPACING OF POST SHALL BE 8 FEET ON STRAIGHT ALIGNMENT 6 FEET ON CURVED ALIGNMENT LESS THAN 30 FEET RADIUS. SPACING SHALL BE UNIFORM BETWEEN CHANGE AND ALIGNMENT.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

METAL HAND RAILING

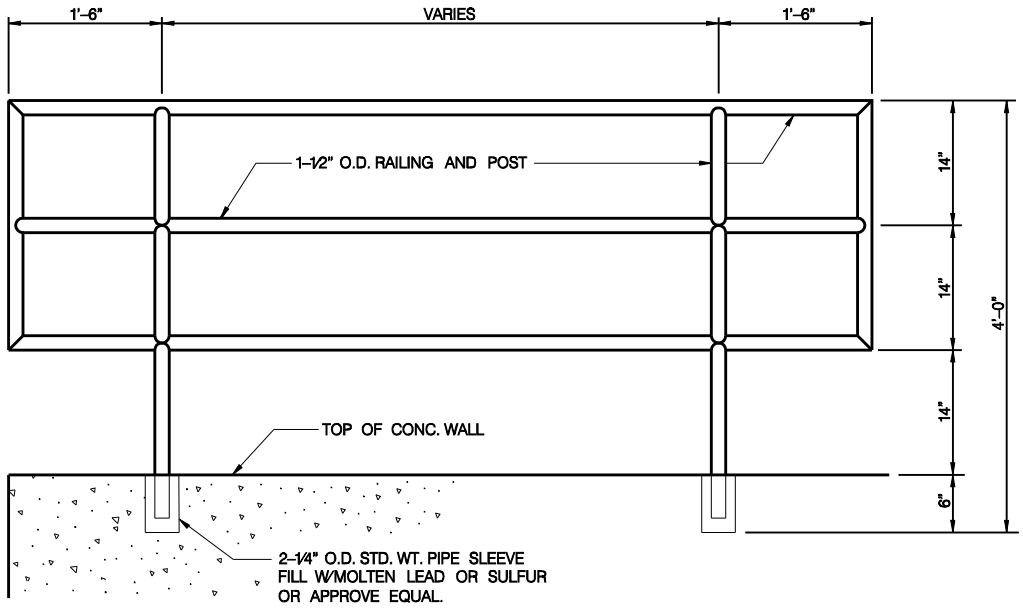
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

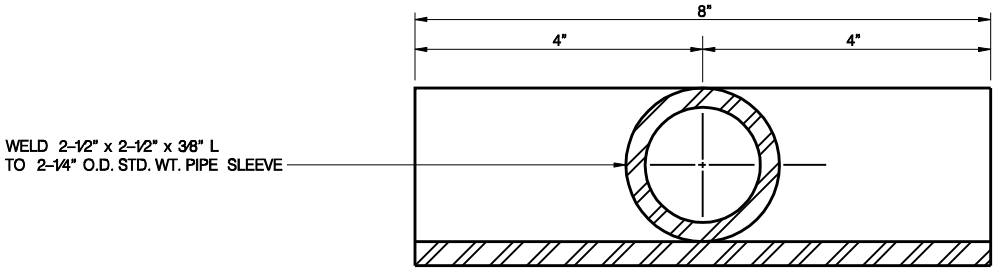
STANDARD PLAN

802–3

SHEET 1 OF 1



STANDARD HEADWALL



SLEEVE

CITY OF SHREVEPORT

STANDARD HANDRAIL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

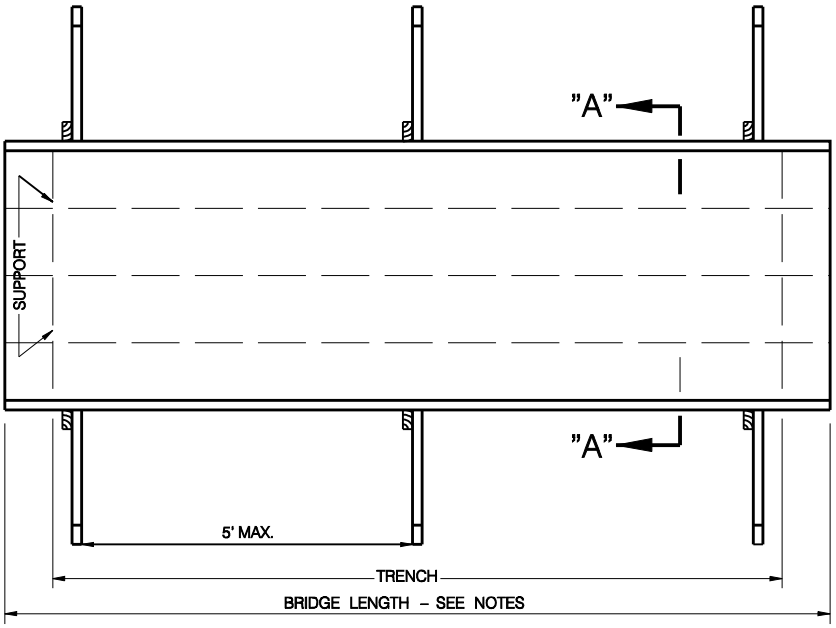
REVISED:

- LUMBER – CONSTRUCTION GRADE
  POSTS AND RAILS S4S
  PLANKS – ROUGH
- BRIDGE LENGTH – PLANK SIZE
  8' – 12' ——— 2" x 12"
  13' – 16' ——— 3" x 12"
  17' – 20' ——— 4" x 12"

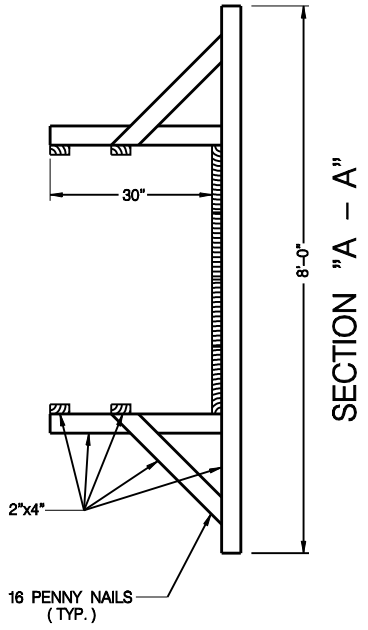
STANDARD PLAN

902–1

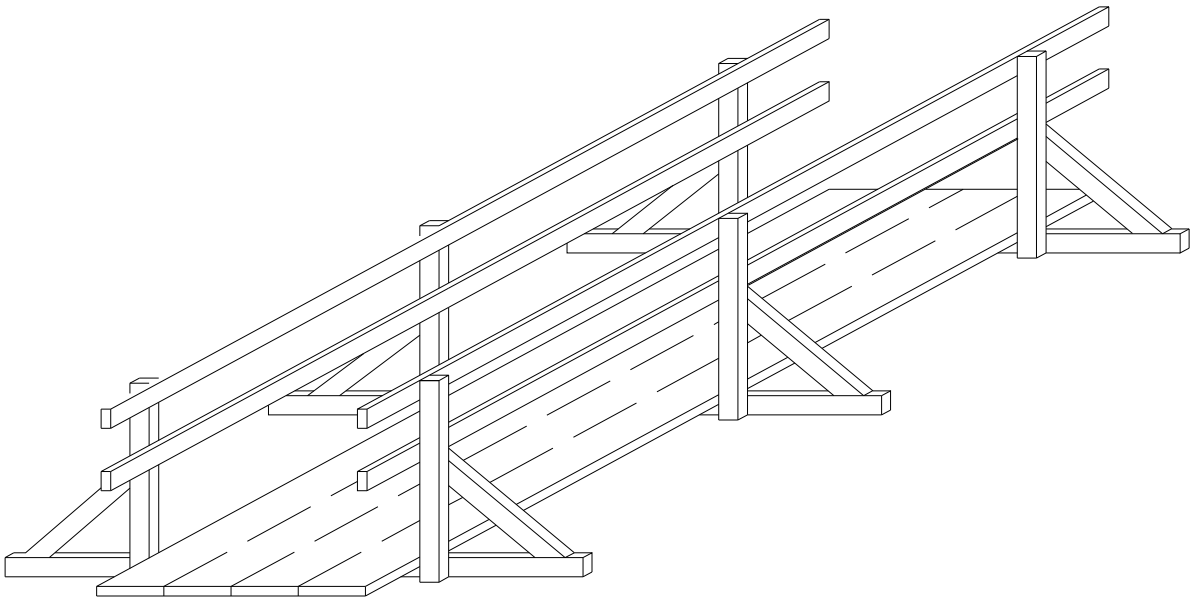
SHEET 1 OF 1



PLAN



SECTION "A – A"



GEOMETRIC VIEW
NOT TO SCALE

CITY OF SHREVEPORT
DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TEMPORARY PEDESTRIAN CROSSING

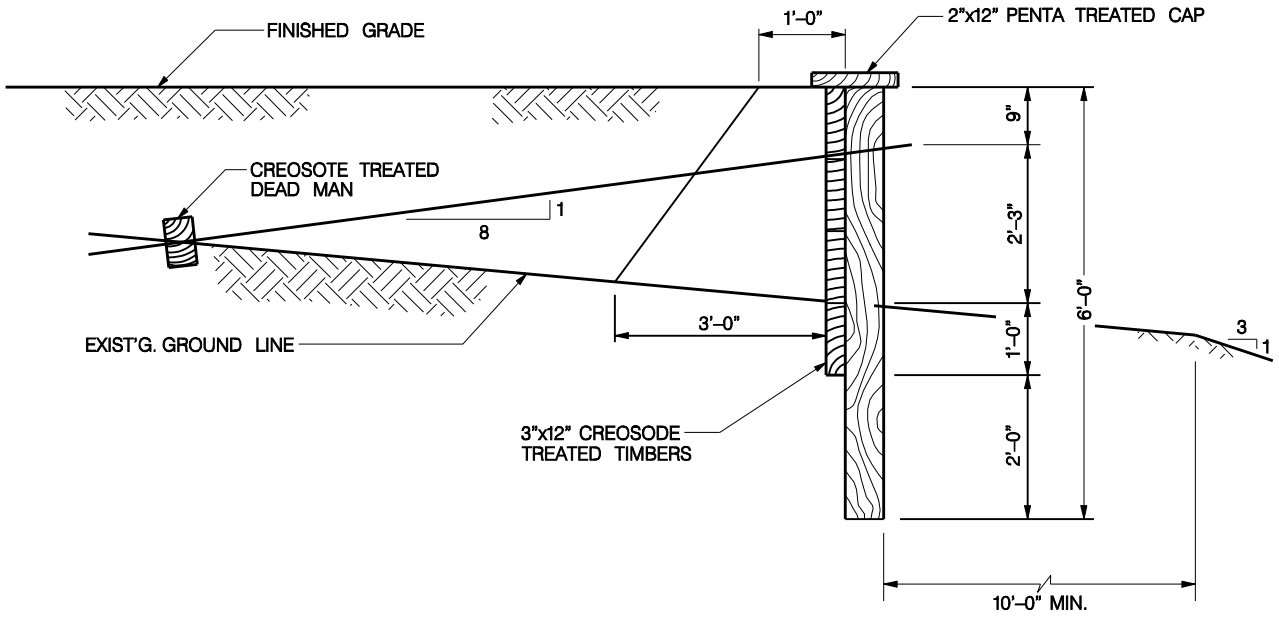
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ
APPROVED: REW
REVISED:

STANDARD PLAN

902–2

SHEET 1 OF 2



NOTE :

1. CREOSOTE TREATED 3"x12" TIMBERS TO SECURED TO EACH POST WITH MINIMUM OF 3'–6" RINGED SHANK GALVANIZED NAILS.
2. PENTA TREATED TIMBERS TO BE SECURED TO EACH POST WITH A MINIMUM OF 2'–5" RINGED SHANK GALVANIZED NAILS AND TO CREOSOTE TREATED TIMBERS ON 1'–0" ON CENTERS.
3. DRAIN FILL MATERIAL TO BE EQUAL PARTS OF A.S.T.M. C–33 FINE AGGREGATE AND SIZE 57 COASE AGGREGATE FIEL MIX.
4. ALL CREOSOTE TREATED MATERIAL TO BE PRESSURE TREATED PINE WITH NOT LESS THAN 10 LBS. RETENSION PER CU.FT.
5. ALL PENTA CHLOROPHENOL TREATED TIMBERS SHALL BE PRESSURE TREATED PINE WITH NOT LESS THAN 10 LBS. RETENSION PER CU.FT. (F.E.D. SPEC. TT–W–571C).

TYPICAL SECTION

NOT TO SCALE

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

TIMBER RETAINING WALL

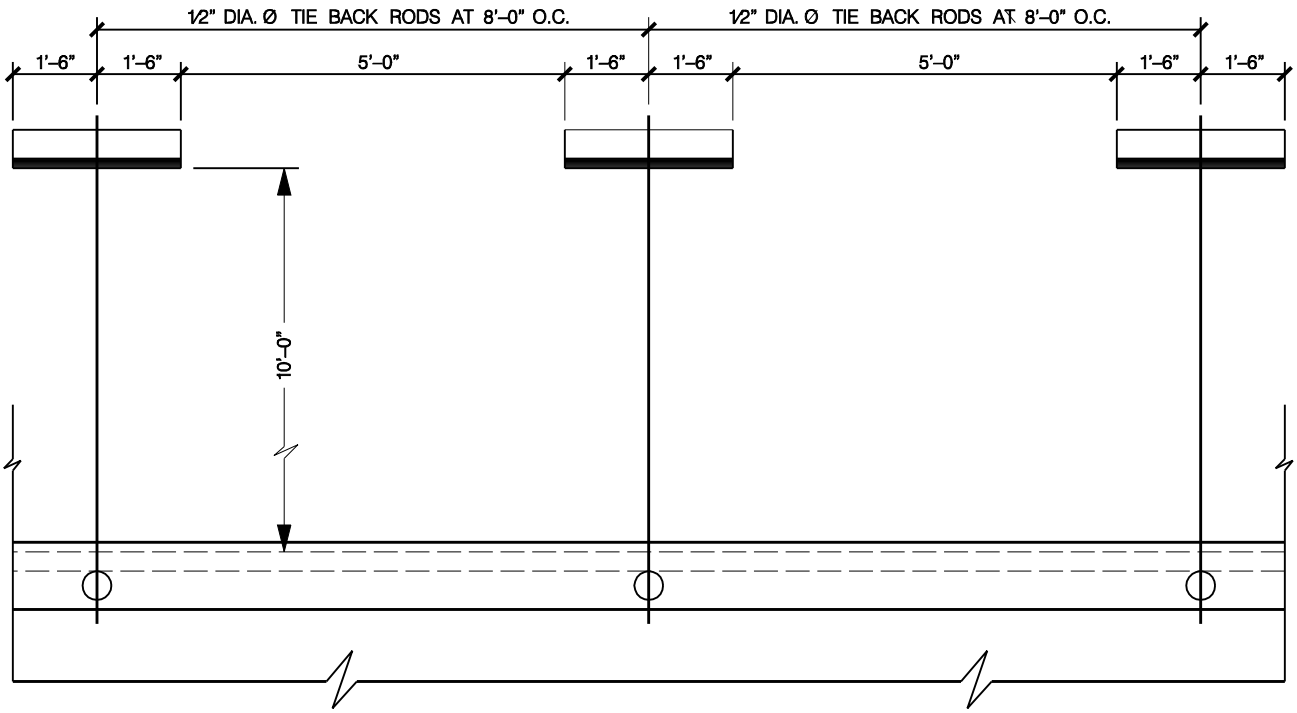
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

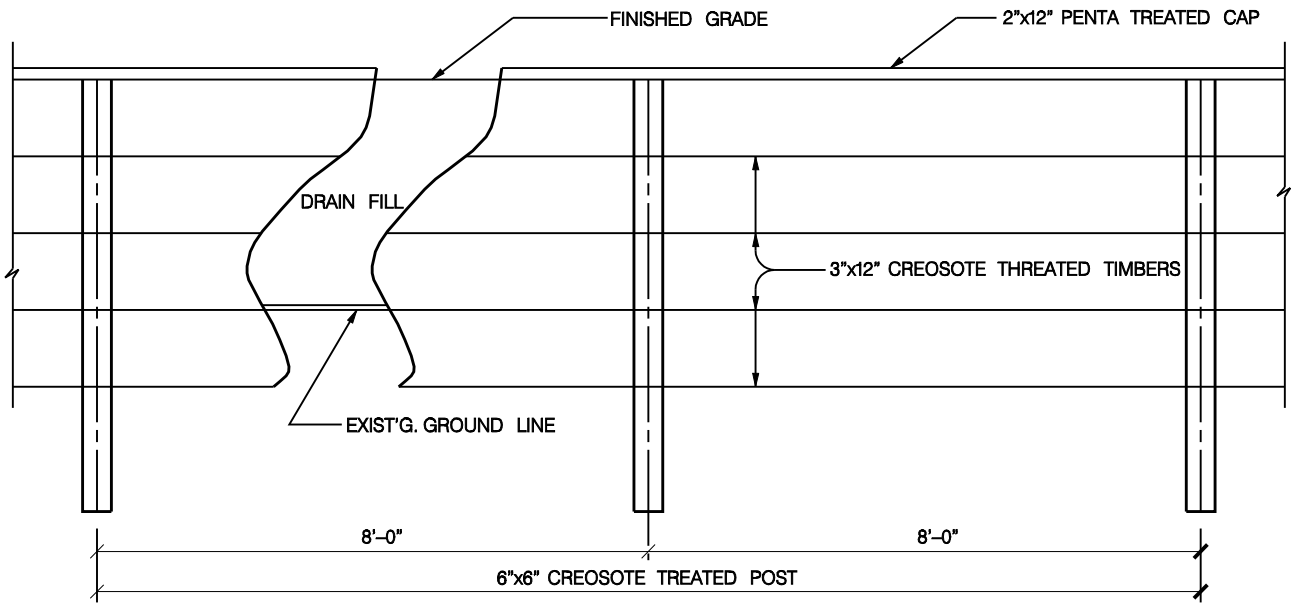
902–3

SHEET 2 OF 2



P L A N

NOT TO SCALE



ELEVATION

NOT TO SCALE

CITY OF SHREVEPORT

TIMBER RETAINING WALL

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

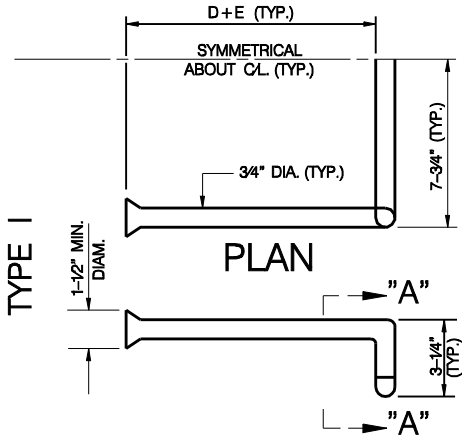
DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

2200–8

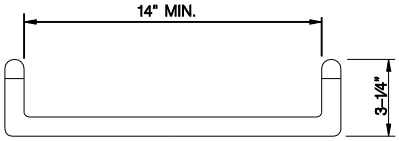
SHEET 1 OF 1

TYPE I

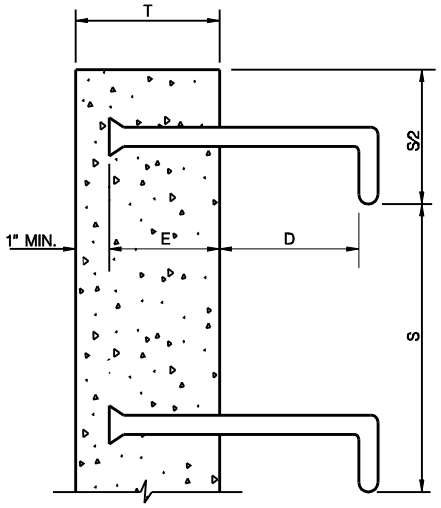


PLAN

SIDE ELEVATION

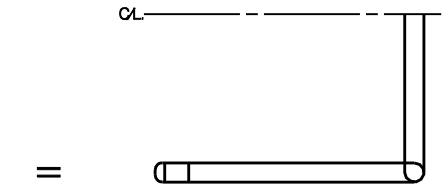


SECTION "A – A"

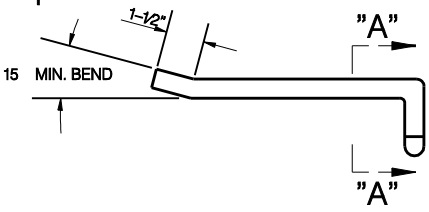


INSTALLATION DETAIL

TYPE II

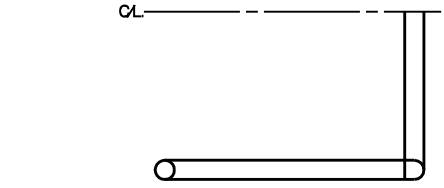


PLAN

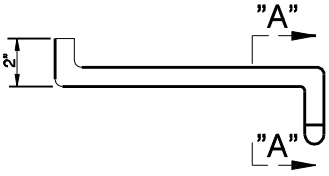


SIDE ELEVATION

TYPE III



PLAN



SIDE ELEVATION

GENERAL NOTES

1. UNLESS OTHERWISE SPECIFIED OR NOTED,STEP MAY BE ANY TYPE SHOWN.
2. STEPS SHALL BE STEEL CONFORMING TO ASTM A 307 AND SHALL BE GALVANIZED AFTER FABRICATION. IF STAINLESS STEEL STEPS ARE SPECIFIED OR CALLED FOR ON PLANS, THE MATERIAL SHALL CONFORM TO ASTM A 276, 300 SERIES.
3. UNLESS OTHERWISE NOTED ON DRAWING OR STANDARD PLANS FOR SPECIFIC STRUCTURES :

   D = 7"
   E = 6" OR T" – 1" WHICHEVER IS LESS.
   S = 16" MAXIMUM, EVENLY SPACED

4. BOTTOM STEP SHALL BE MAXIMUM OF 2 FEET ABOVE FLOOR OR SHELF.
5. TYPE 1 AND 2 STEPS MAY BE CAST IN PLACE OR PLACED IN THE CENTER OF 1–1/2" MINIMUM DIAMETER DRILLED OR FORMED HOLES AND SET WITH HIGH – STRENGTH (6000 PSI. MIN.) , NON–SHRINK GROUT . TYPE 3 STEP SHALL BE CAST IN PLACE.

CITY OF SHREVEPORT

STEEL STEP

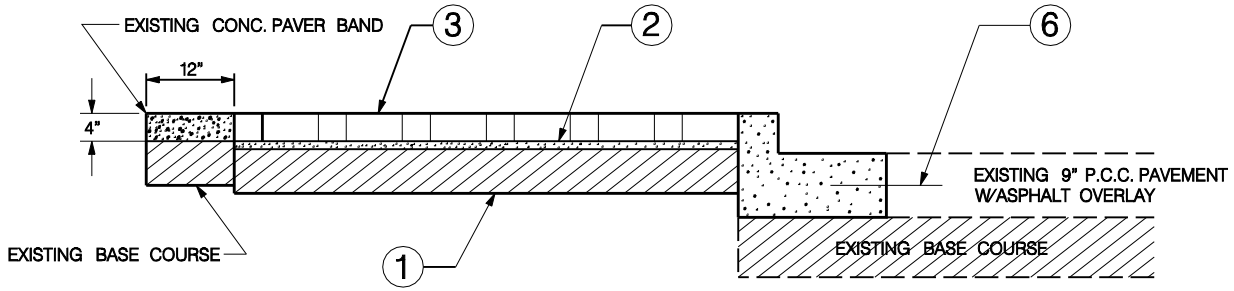
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

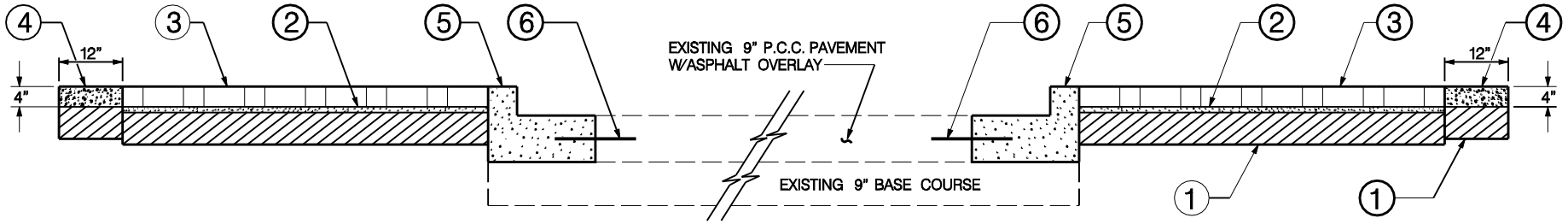
STANDARD PLAN

S–1

SHEET 1 OF 1



TYPICAL FINISHED SECTION
(NOT TO SCALE)



TYPICAL FINISHED SECTION
(NOT TO SCALE)

LEGEND :

1. REQUIRED CRUSHED STONE BASE COURSE (6" THICK)
2. REQUIRED SAND LEVELING COURSE (1" MAX. THICKNESS) (INCLUDED IN ITEM S–001).
3. REQUIRED 6 Cm HOLLAND STONE CONC. PAVERS, SHREVEPORT BLEND COLOR.
4. 12" x 4" CONCRETE PAVER BAND
5. 3" CONCRETE CURB AND GUTTER
6. 24" L, #4 DOWEL BAR AT 24" O.C. DRILLED AND EPOXY

NOTE :

SAND LEVELING COURSE SHALL BE A MAXIMUM OF 1" IN THICKNESS MATERIALS AND PLACEMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR THE HOLLAND STONE PAVERS.

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE CONCRETE PAVER SIDEWALK

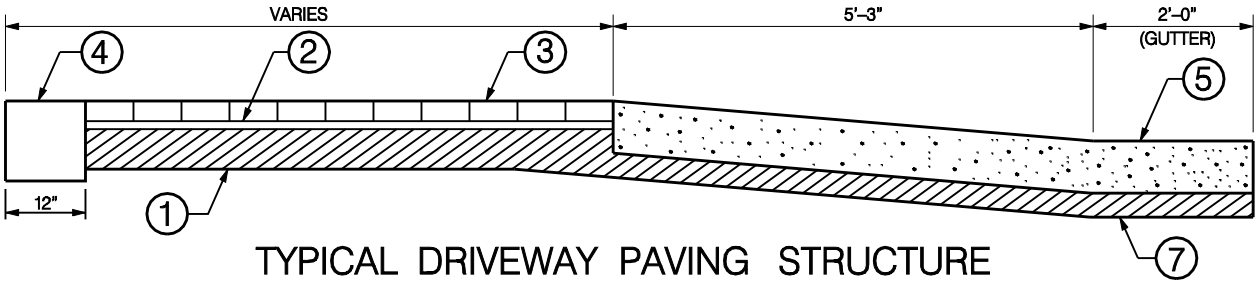
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

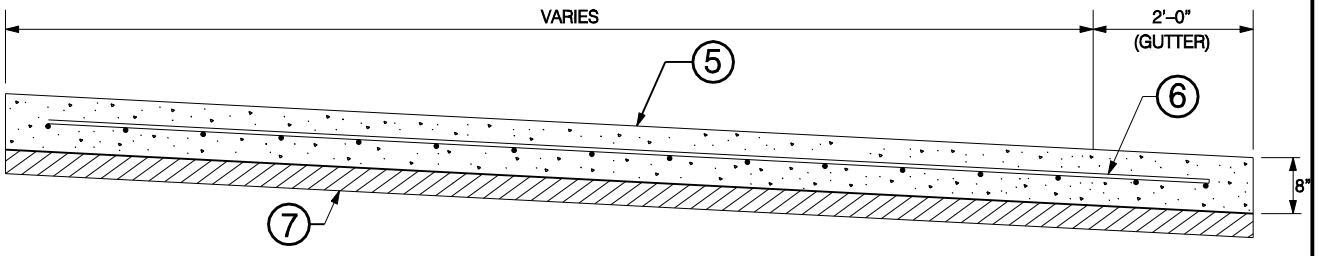
S–2

SHEET 1 OF 2



TYPICAL DRIVEWAY PAVING STRUCTURE

(NOT TO SCALE)



TYPICAL DRIVEWAY AT ALLEY PAVING STRUCTURE

(NOT TO SCALE)

LEGEND :

1. REQUIRED CRUSHED STONE BASE COURSE (6" THICK)
2. REQUIRED SAND LEVELING COURSE (1" MAX. THICKNESS) (INCLUDED IN ITEM S–001).
3. REQUIRED 6 Cm HOLLAND STONE CONC. PAVERS, SHREVEPORT BLEND COLOR.
4. 12" x 2" CONCRETE PAVER BAND
5. 8" CONCRETE DRIVEWAY.
6. REINFORCEMENT AT 12" O.C. EACH WAY, #4 BARS.
7. REQUIRED CRUSHED STONE BASE COURSE (4" THICK).

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE SIDEWALK COVER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

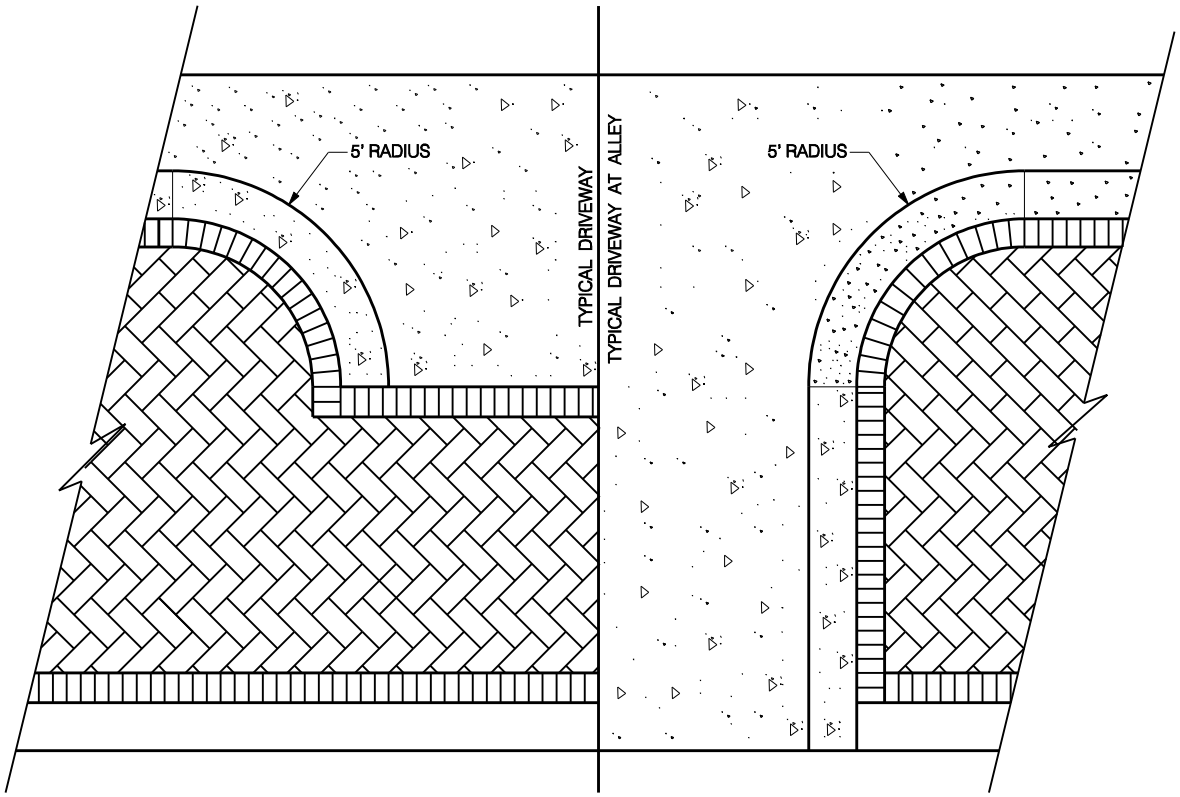
APPROVED: REW

REVISED:

STANDARD PLAN

S–2a

SHEET 2 OF 2



TYPICAL DRIVEWAY PLAN VIEW

(NOT TO SCALE)

NOTE :

SAND LEVELING COURSE SHALL BE A MAXIMUM OF 1" IN THICKNESS MATERIALS AND PLACEMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR THE HOLLAND STONE PAVERS.

CITY OF SHREVEPORT DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE SIDEWALK COVER

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

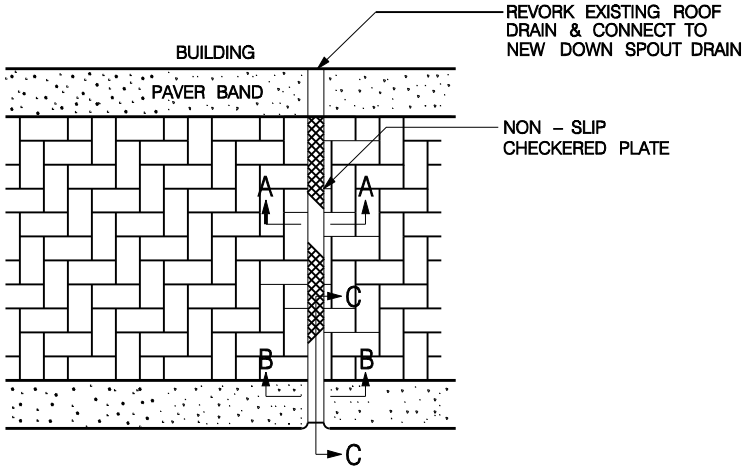
APPROVED: REW

REVISED:

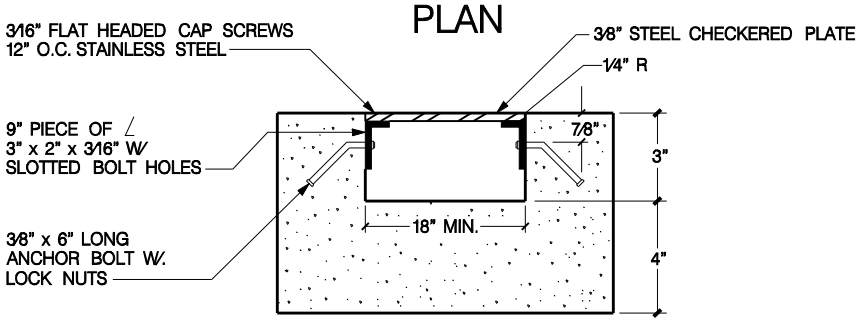
STANDARD PLAN

S–3

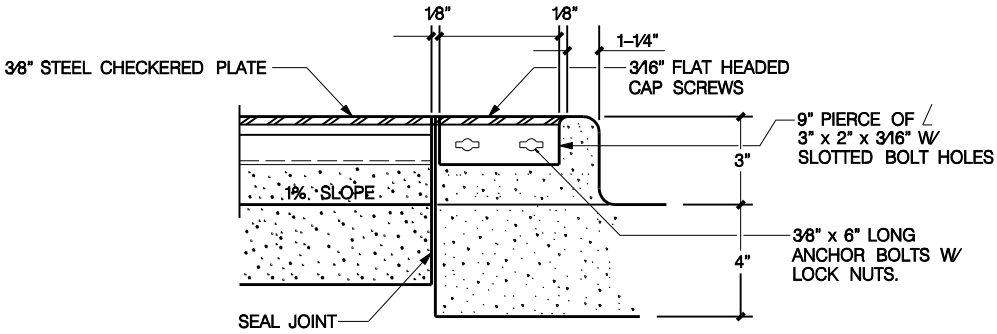
SHEET 1 OF 1



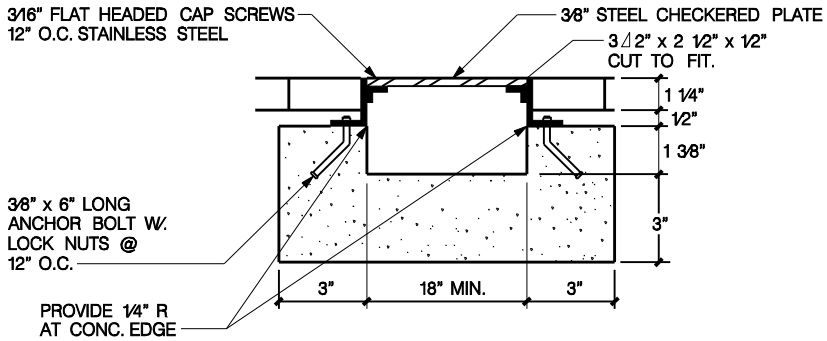
PLAN



SECTION "B – B"



SECTION "C – C"



SECTION "A – A"

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE ROOF DRAIN CONNECTION

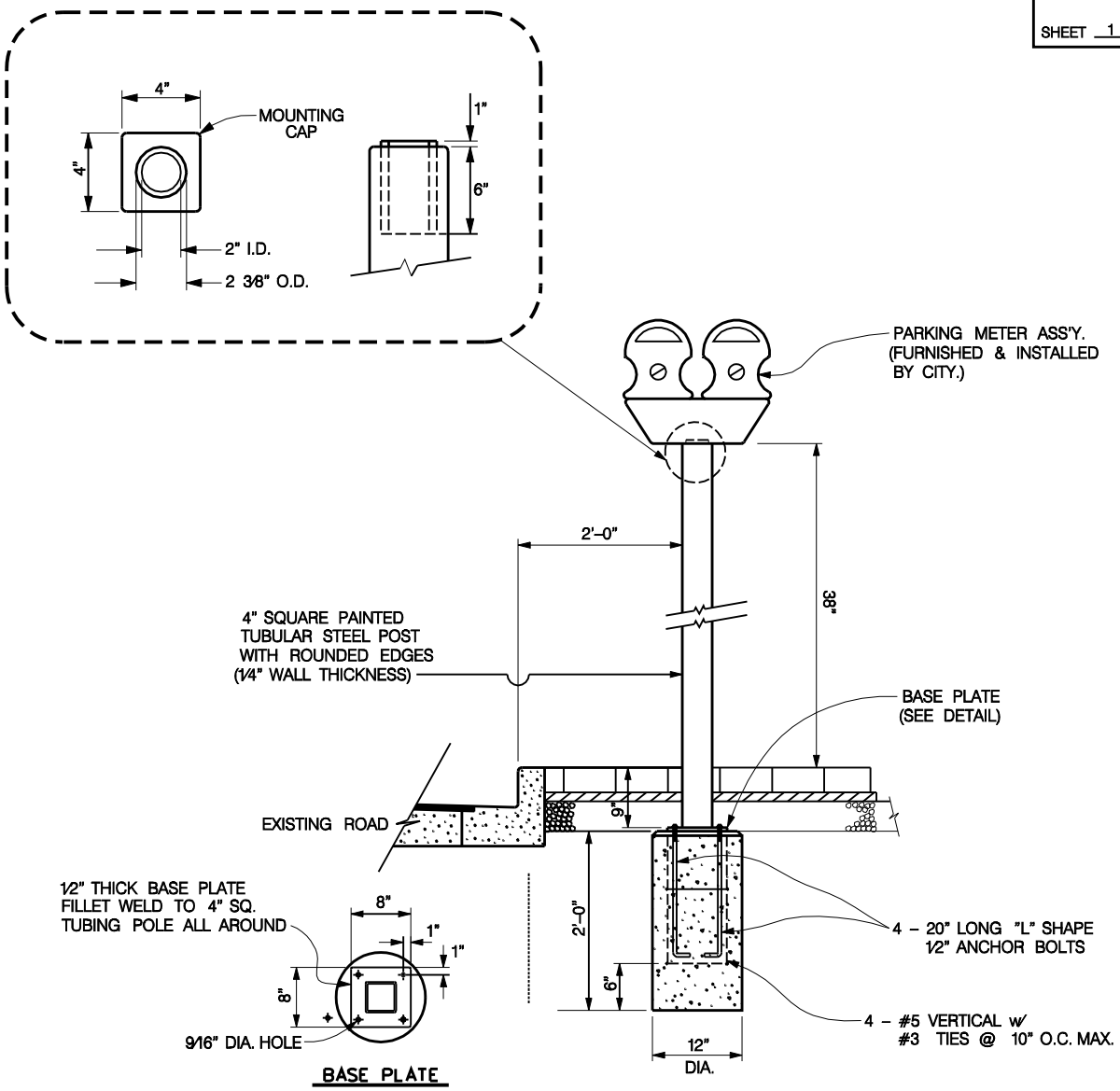
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

S–4

SHEET 1 OF 1



PARKING METER POST

(NOT TO SCALE)

NOTE: METAL SHALL BE PAINTED WITH MARTIN SENOUR WILLAMSBURG RESTORATION MARKET SQUARE TAVERN DARK GREEN PAINT W85–0620.

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE PARKING METER POST

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

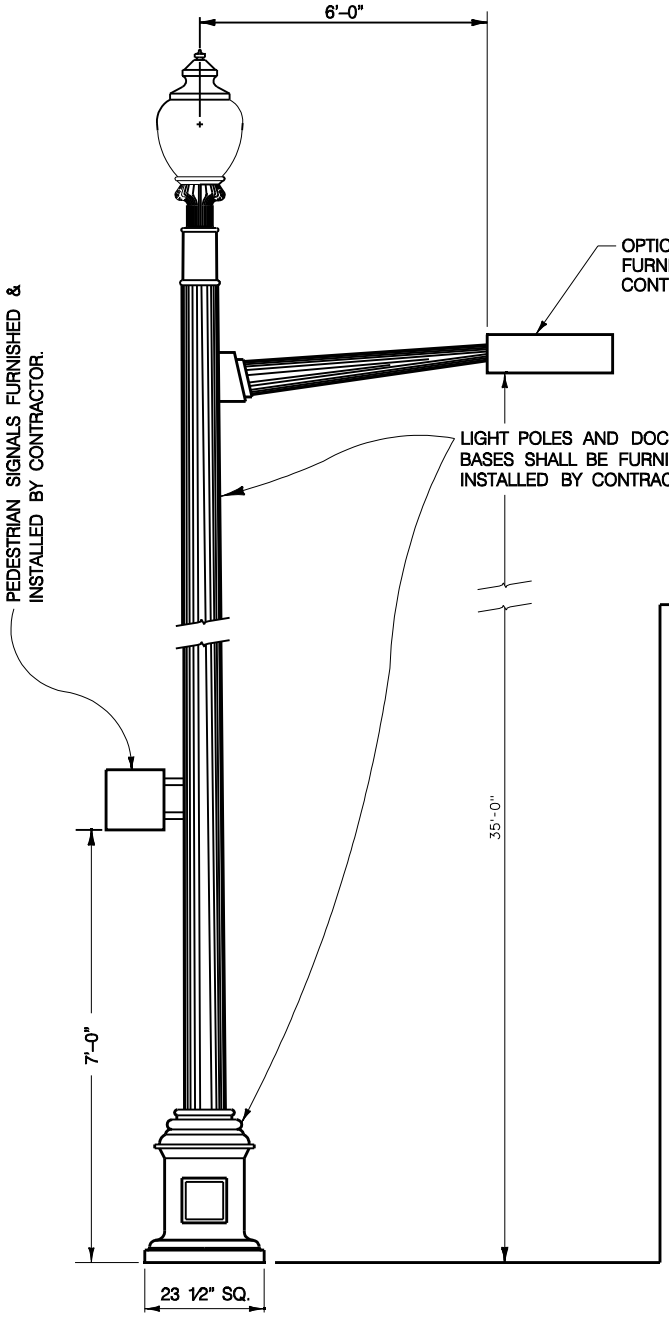
APPROVED: REW

REVISED:

STANDARD PLAN

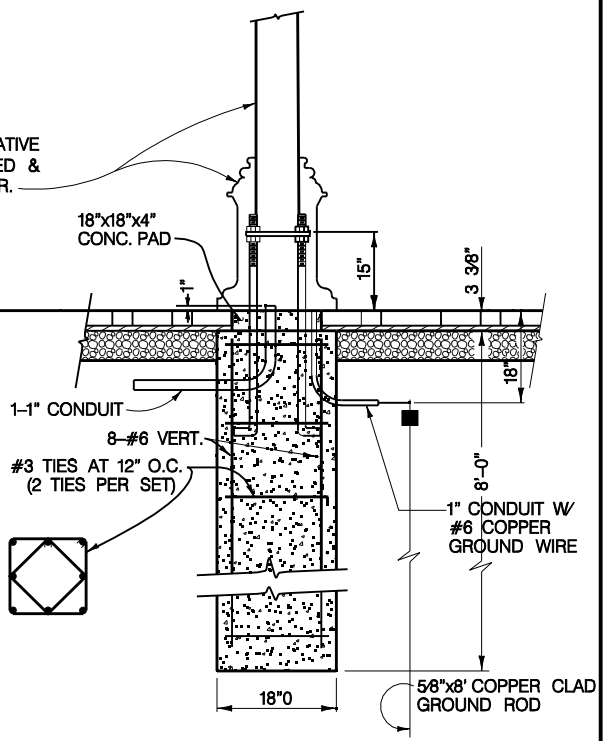
S–8

SHEET 1 OF 1



DETAIL FOR
HIGH–RISE LIGHT POLE

(NOT TO SCALE)



FOUNDATION DETAIL FOR
HIGH–RISE LIGHT POLE

(NOT TO SCALE)

NOTE: FOUNDATION FOR PHOTOELECTRIC CELL POLE SIMILAR.

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE LIGHTING

HIGH–RISE LIGHT POLE AND FOUNDATION

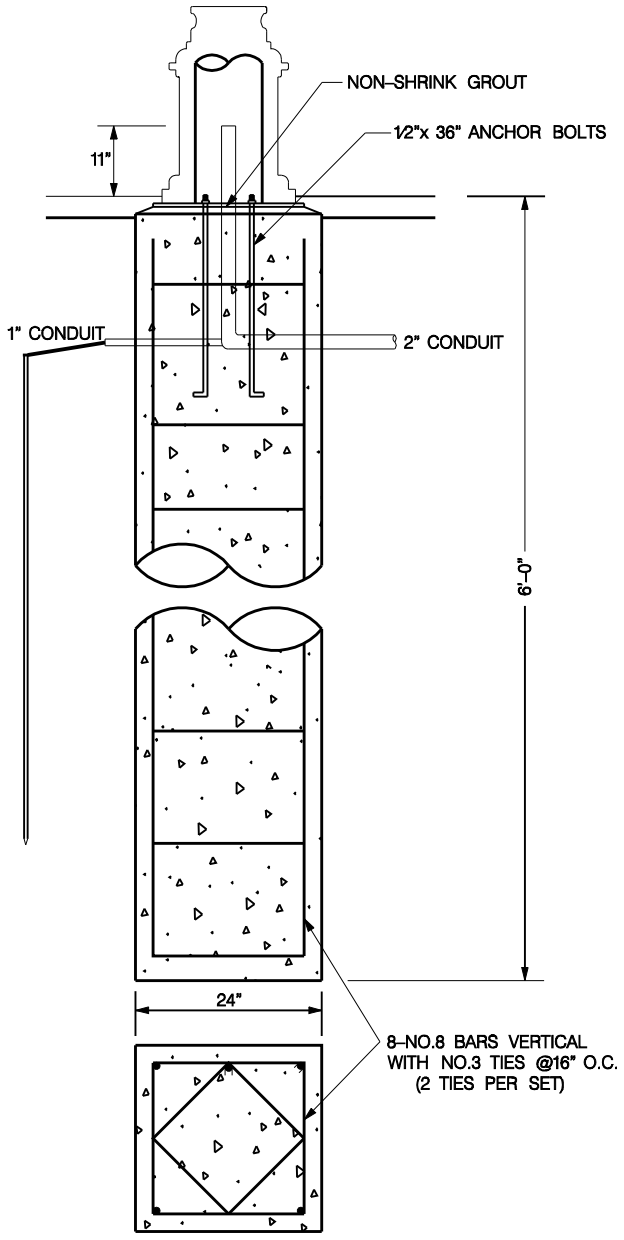
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

S–9

SHEET 1 OF 1



SIGNAL POLE
FOUNDATION DETAIL

(NOT TO SCALE)

SIGNAL POLE DETAIL

(NOT TO SCALE)

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE LIGHTING
SIGNAL POLE AND FOUNDATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

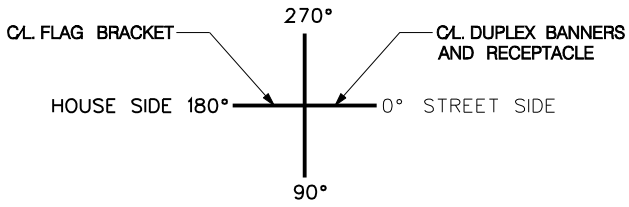
APPROVED: REW

REVISED:

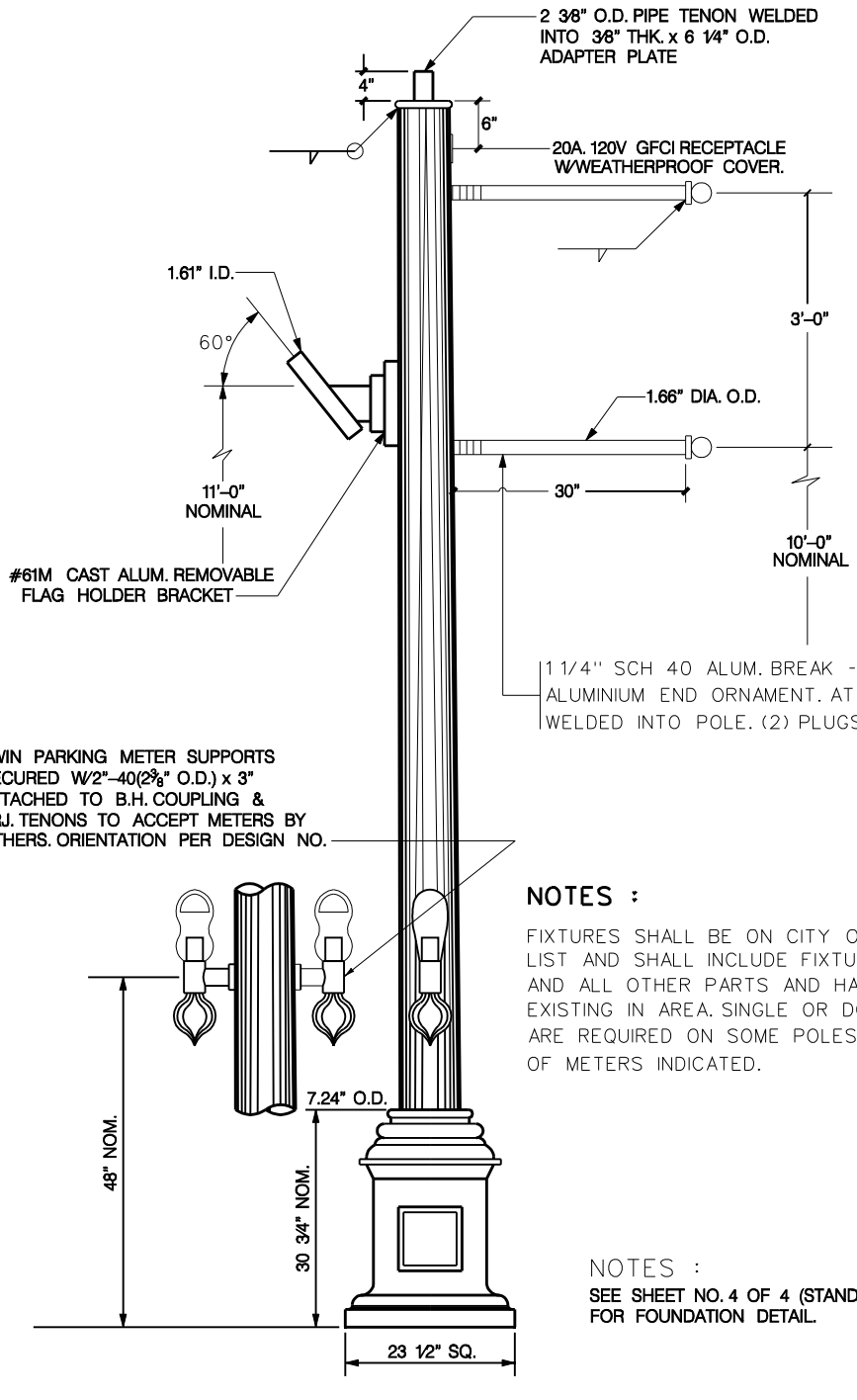
STANDARD PLAN

S–10

SHEET 1 OF 4



TOP VIEW ORIENTATION



NOTES :

FIXTURES SHALL BE ON CITY OF SHREVEPORT PRE-APPROVED LIST AND SHALL INCLUDE FIXTURE, LAMP, ARMS, FLAG HOLDER AND ALL OTHER PARTS AND HARDWARE REQUIRED TO MATCH EXISTING IN AREA. SINGLE OR DOUBLE PARKING METER BRACKETS ARE REQUIRED ON SOME POLES. REFER TO SITE PLAN FOR NUMBER OF METERS INDICATED.

NOTES :

SEE SHEET NO. 4 OF 4 (STANDARD PLAN NO. S–13) FOR FOUNDATION DETAIL.

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE LIGHTING

LIGHT POLE W/METER, FLAG AND BANNER SUPPORTS

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

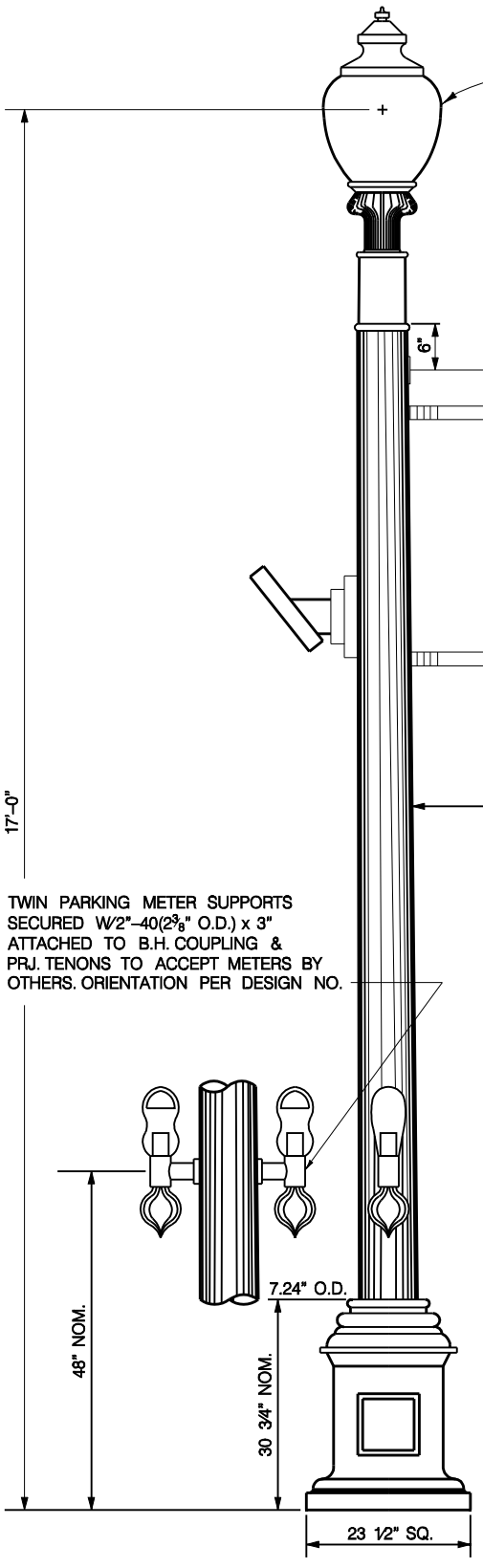
APPROVED: REW

REVISED:

STANDARD PLAN

S–11

SHEET 2 OF 4



NOTES :

FIXTURES SHALL BE ON CITY OF SHREVEPORT PRE-APPROVED LIST AND SHALL INCLUDE FIXTURE, LAMP, ARMS, FLAG HOLDER AND ALL OTHER PARTS AND HARDWARE REQUIRED TO MATCH EXISTING IN AREA. SINGLE OR DOUBLE PARKING METER BRACKETS ARE REQUIRED ON SOME POLES. REFER TO SITE PLAN FOR NUMBER OF METERS INDICATED.

NOTES :

SEE SHEET NO. 4 OF 4 (STANDARD PLAN NO. S–13) FOR FOUNDATION DETAIL.

CITY OF SHREVEPORT

DEPARTMENT OF OPERATIONAL SERVICES

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE LIGHTING
SINGLE GLOBE LIGHT POLE (TYPE S1)

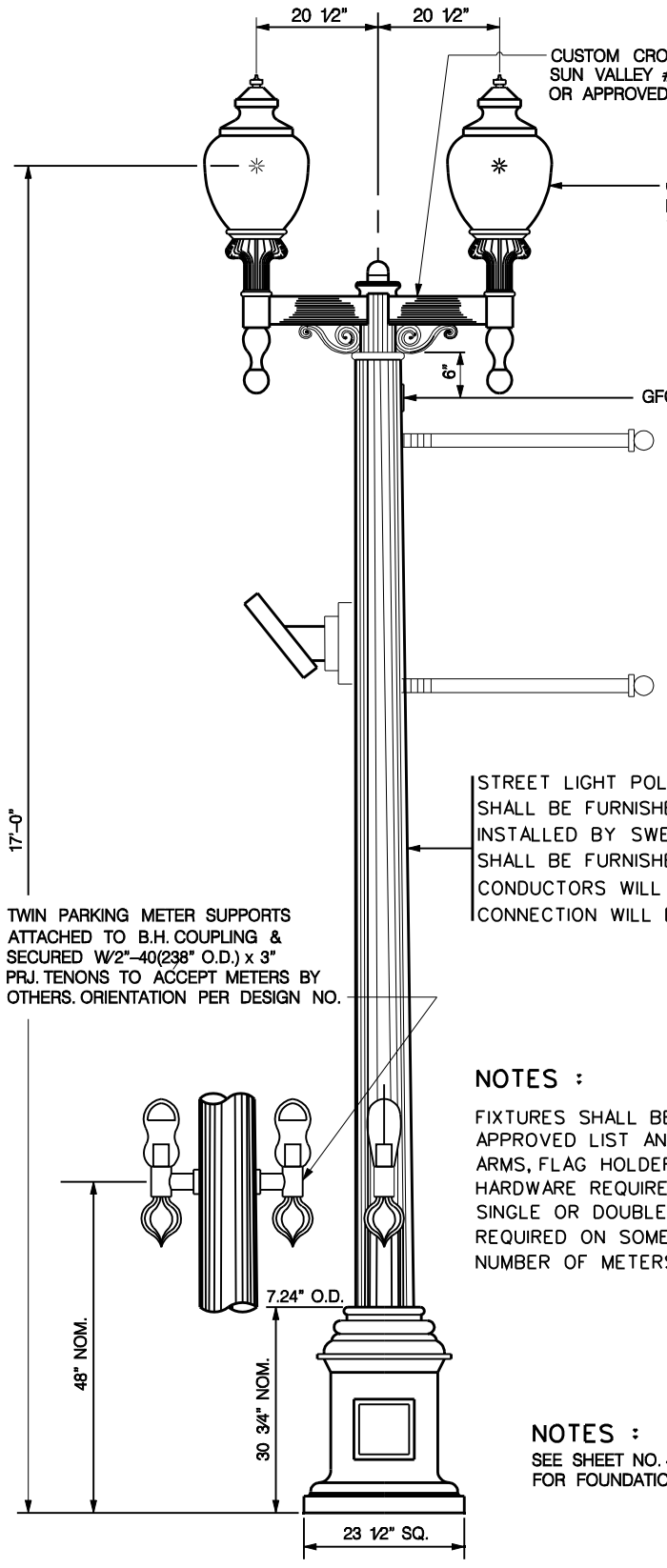
USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran
CHECKED: AZ.
APPROVED: REW
REVISED:

STANDARD PLAN

S–12

SHEET 3 OF 4



NOTES :

FIXTURES SHALL BE ON CITY OF SHREVEPORT PRE-APPROVED LIST AND SHALL INCLUDE FIXTURE, LAMP, ARMS, FLAG HOLDER AND ALL OTHER PARTS AND HARDWARE REQUIRED TO MATCH EXISTING IN AREA. SINGLE OR DOUBLE PARKING METER BRACKETS ARE REQUIRED ON SOME POLES. REFER TO SITE PLAN FOR NUMBER OF METERS INDICATED.

NOTES :

SEE SHEET NO. 4 OF 4 (STANDARD PLAN NO. S–13) FOR FOUNDATION DETAIL.

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE LIGHTING

DOUBLE GLOBE LIGHT POLE (TYPE S2)

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

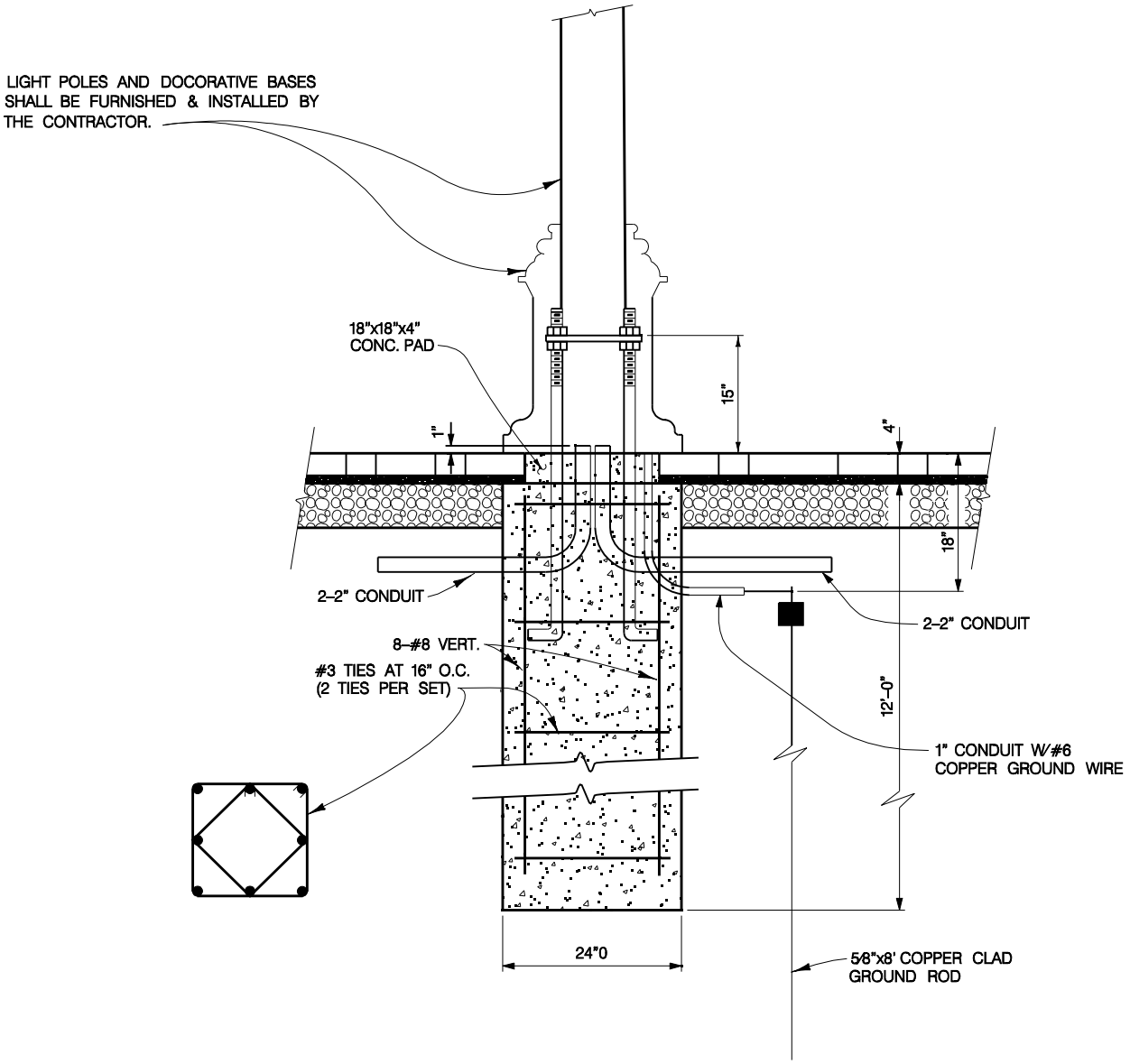
APPROVED: REW

REVISED:

STANDARD PLAN

S–13

SHEET 4 OF 4



SINGLE GLOBE & DOUBLE GLOBE LIGHT POLE FOUNDATION

(NOT TO SCALE)

CITY OF SHREVEPORT

DOWNTOWN STREETSCAPE LIGHTING

LIGHT POLE FOUNDATION

USE WITH CITY OF SHREVEPORT STANDARD SPECIFICATIONS

DRAWN: Nhan Tran

CHECKED: AZ.

APPROVED: REW

REVISED: