

SIDEWALK RAMP TYPE I, II, III

RADIUS GRANITE CURB SECTION

BITUMINOUS DRIVEWAY RAMP (HALF PLAN)

CURBING TRANSITION AT EXISTING DRIVEWAY RAMP

TRANSITION TABLE	
VERTICAL (V)	CURB LENGTH (L)
1"	4-0' MIN.
2"	5-0' MIN.
3"	6-0' MIN.

Revisions	By	Date	Notice

Sign-Offs	By	Date
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Standard Drawing No. SR-1

Job No.

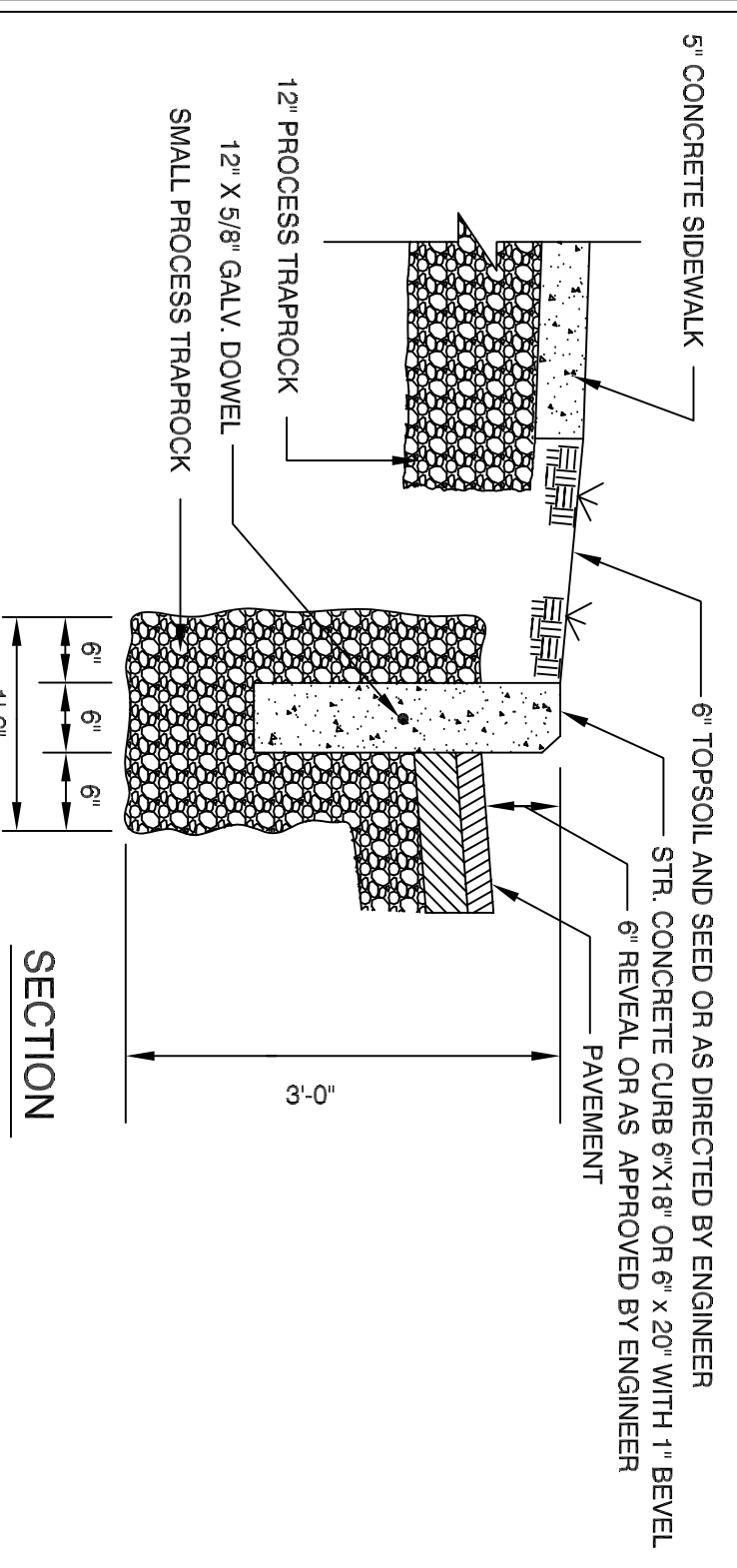
Date January 2005



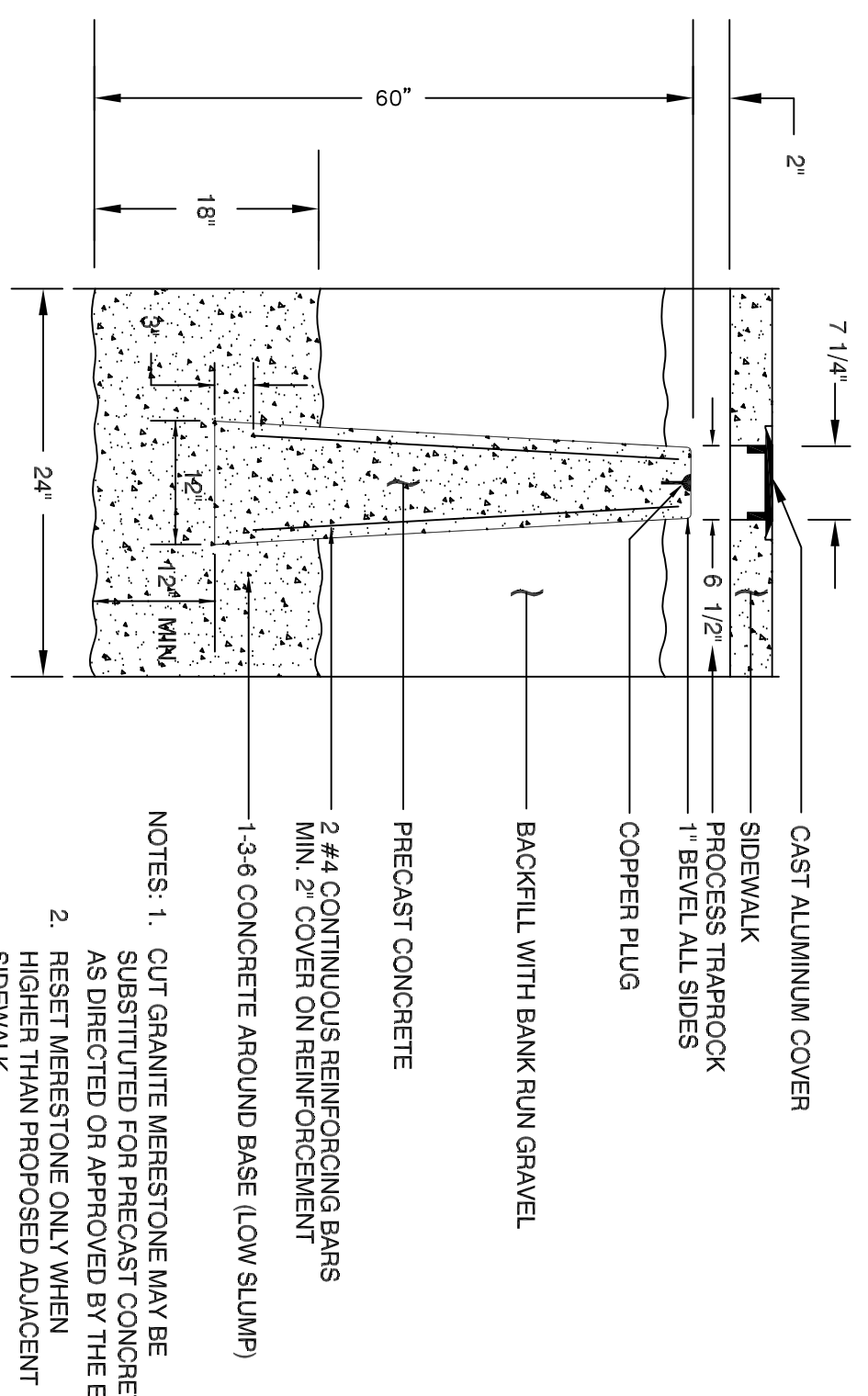
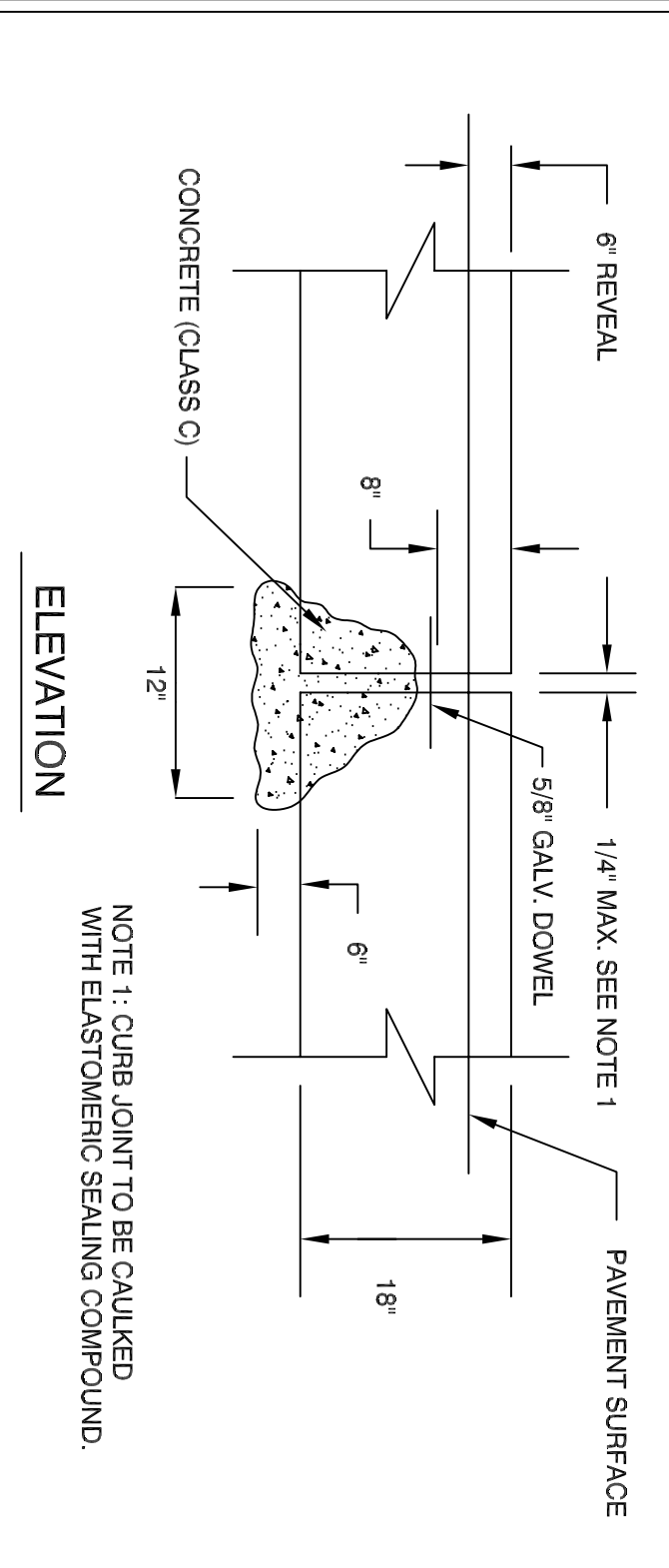
City of Hartford, Connecticut  
 Department of Public Works  
 Standard Roadway and Street Details  
 Curbing Sidewalk and Driveways



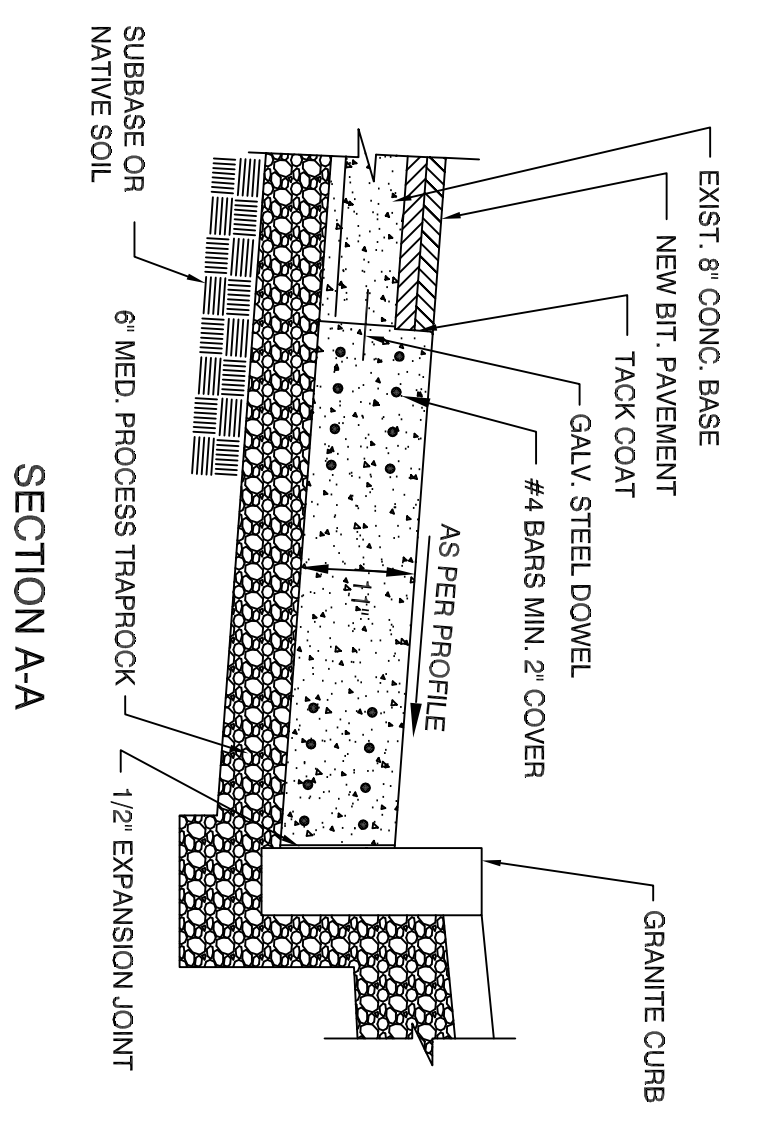
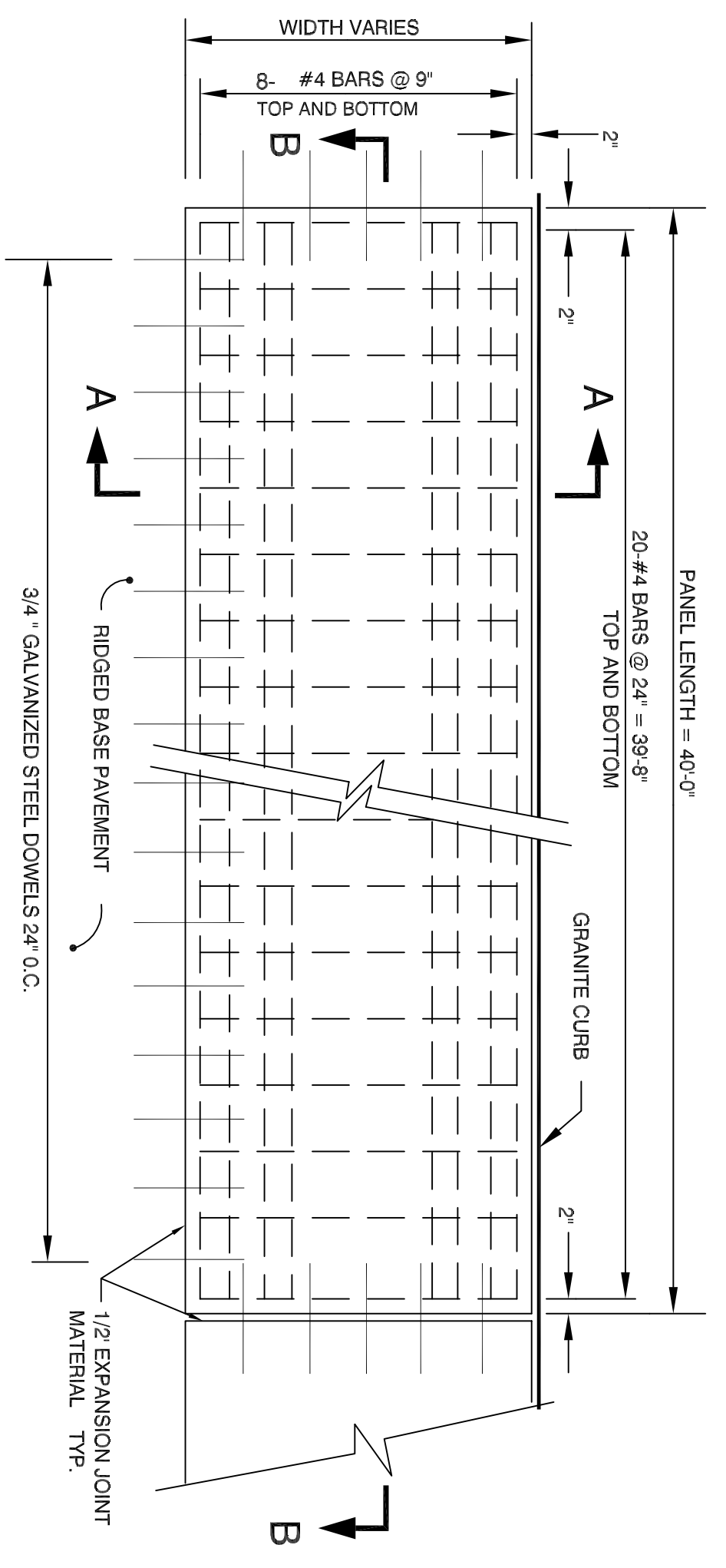
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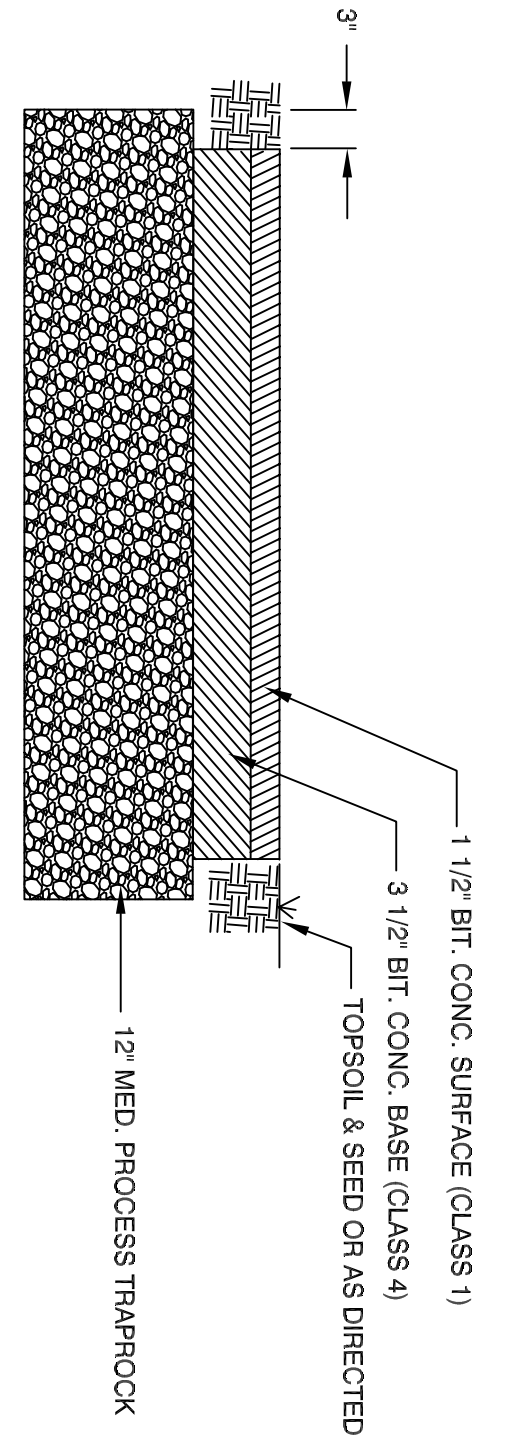
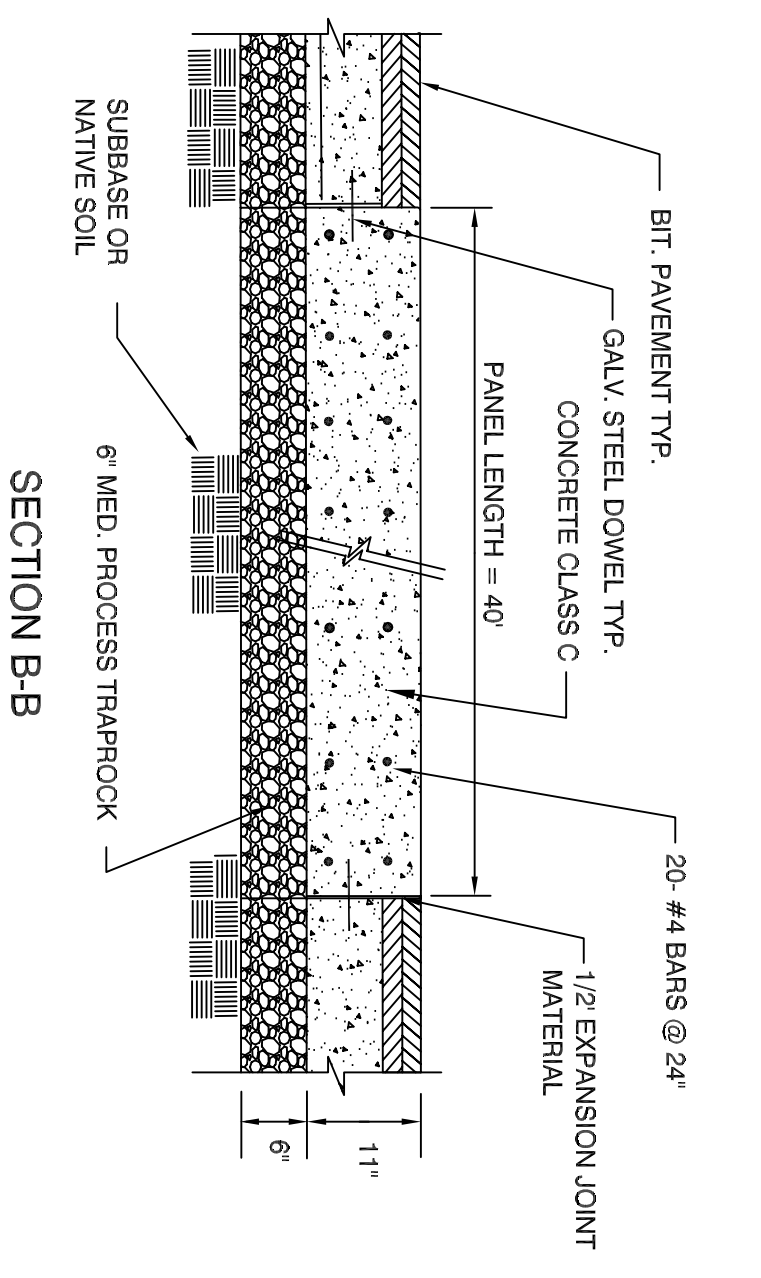
### STRAIGHT PRECAST CONCRETE CURB SECTION



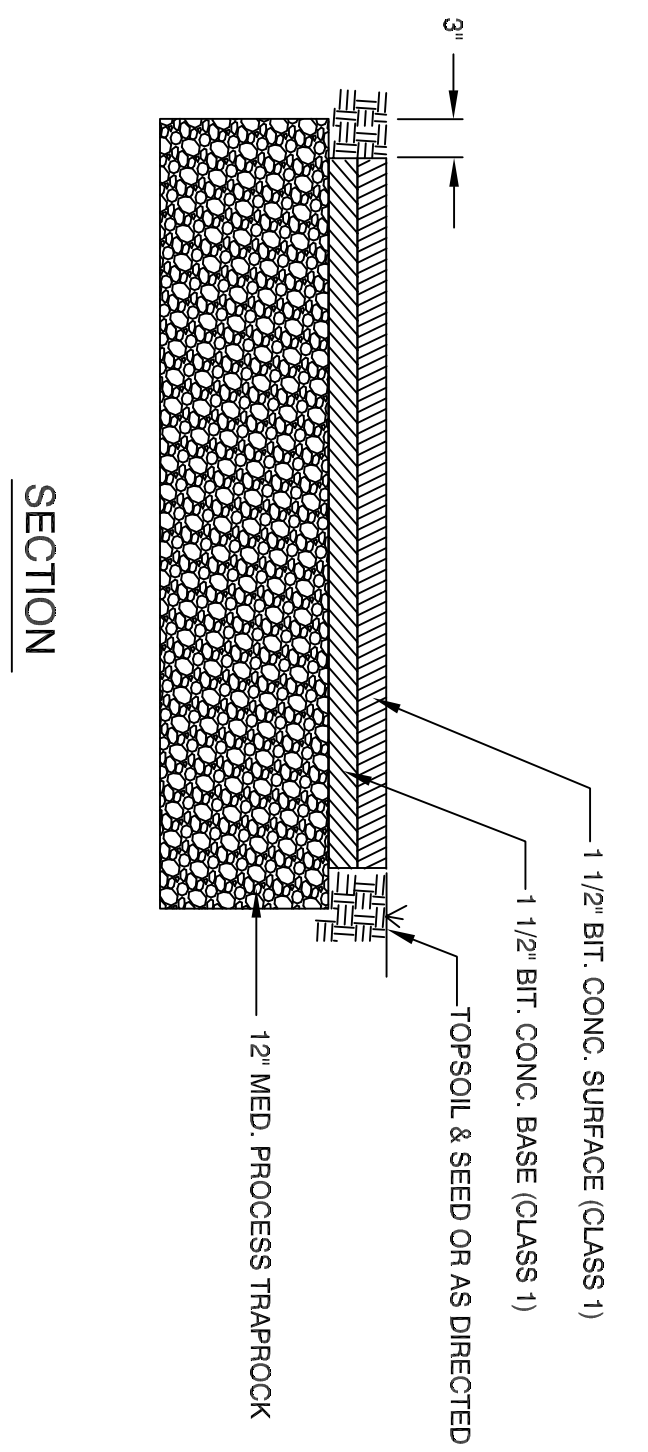
### CONCRETE MERESTONE



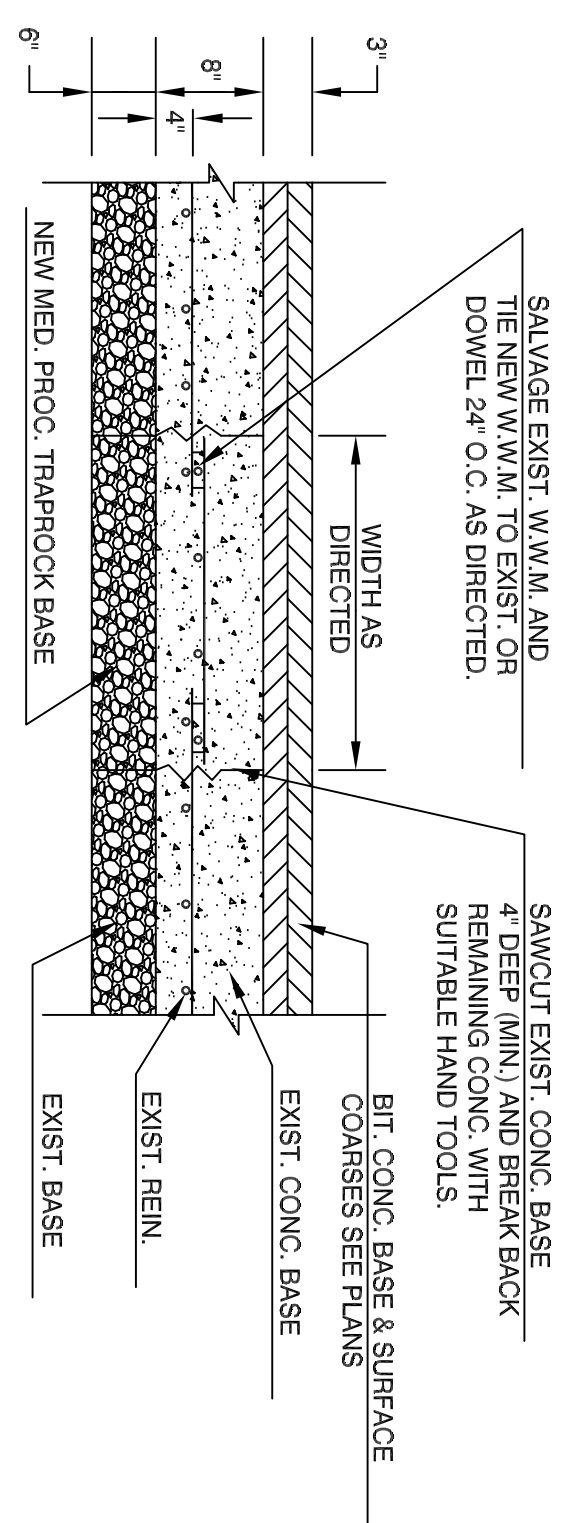
### REINFORCED CONCRETE BUS PAD



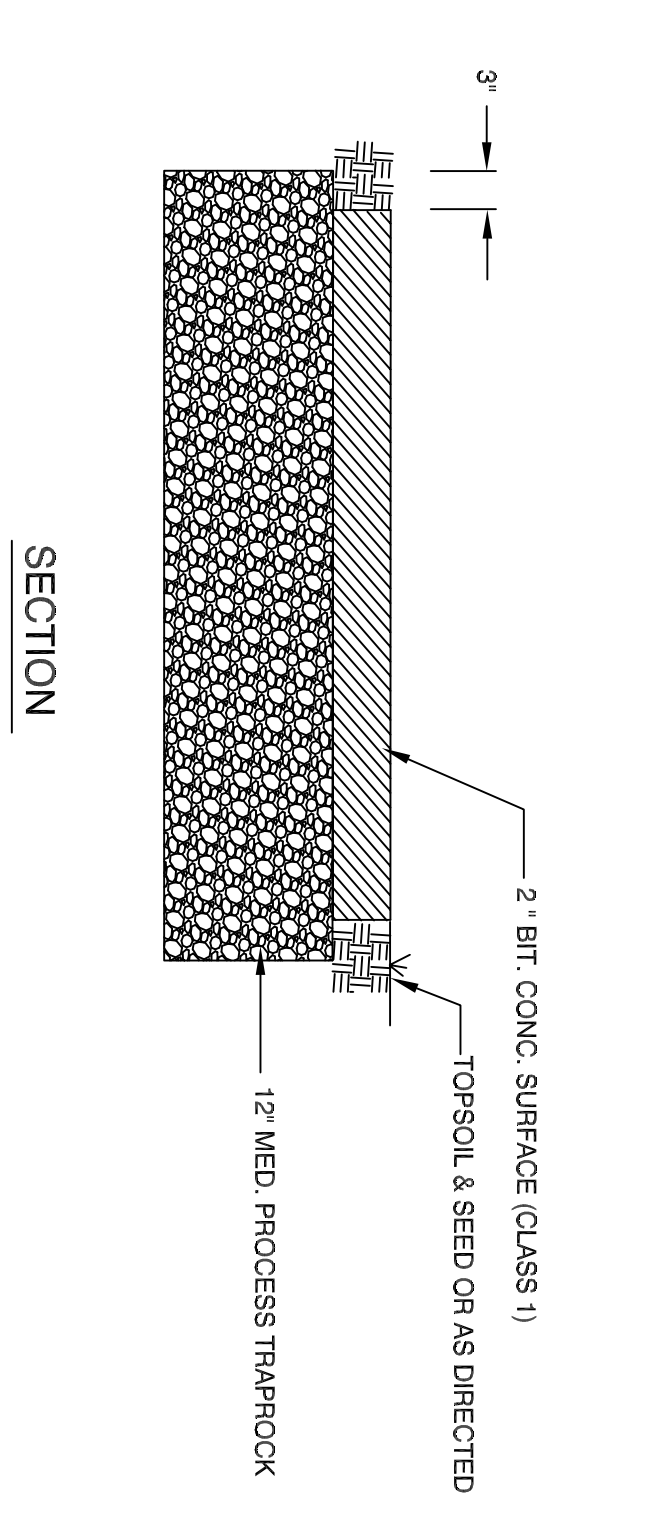
### 5" BITUMINOUS SURFACE ON NEW FOUNDATION



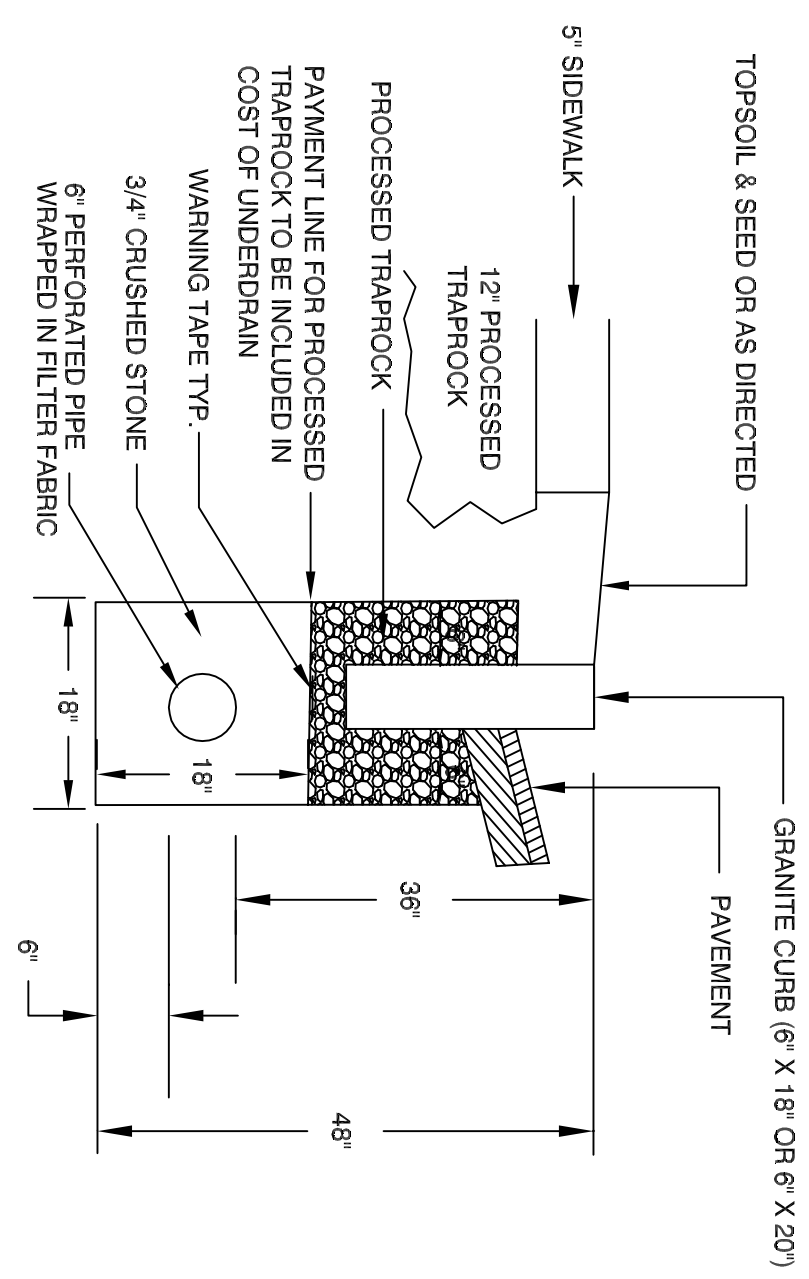
### 3" BITUMINOUS SURFACE ON NEW FOUNDATION



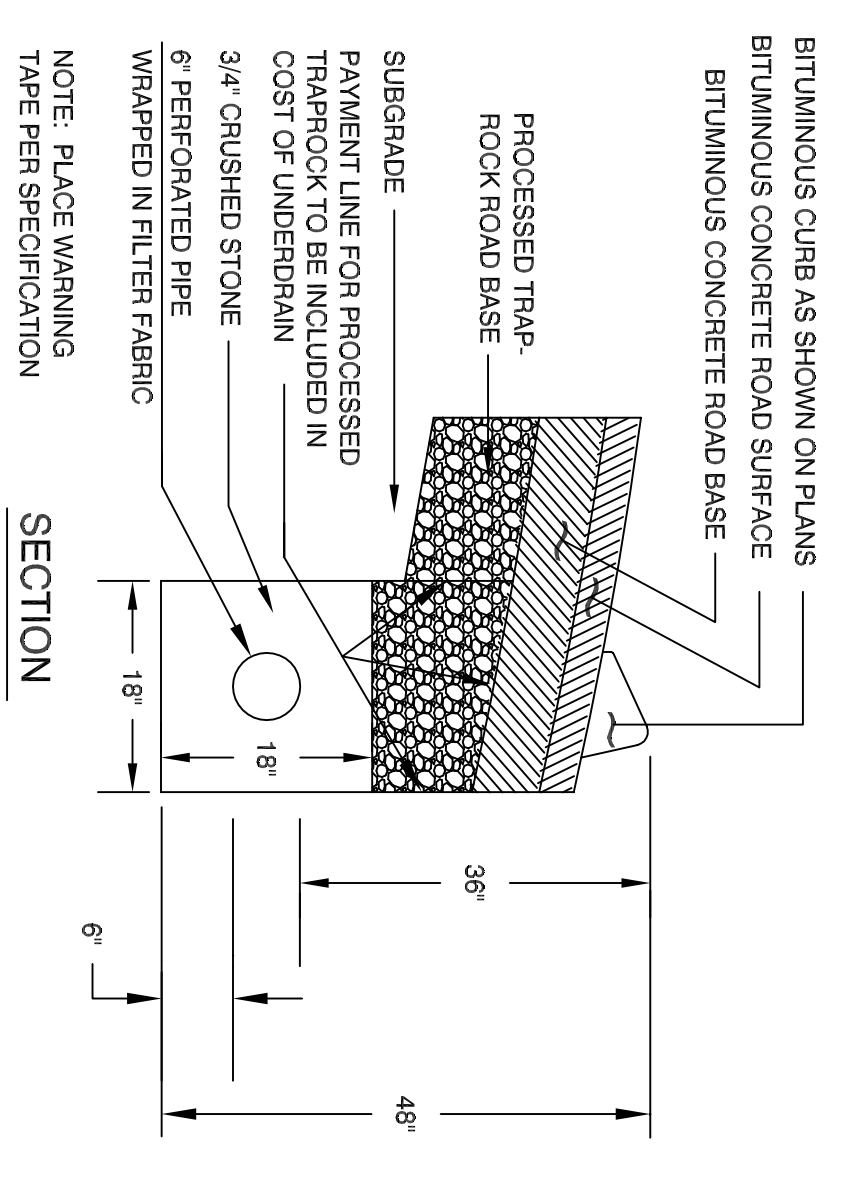
### REPAIR 8" REINFORCED CONCRETE BASE



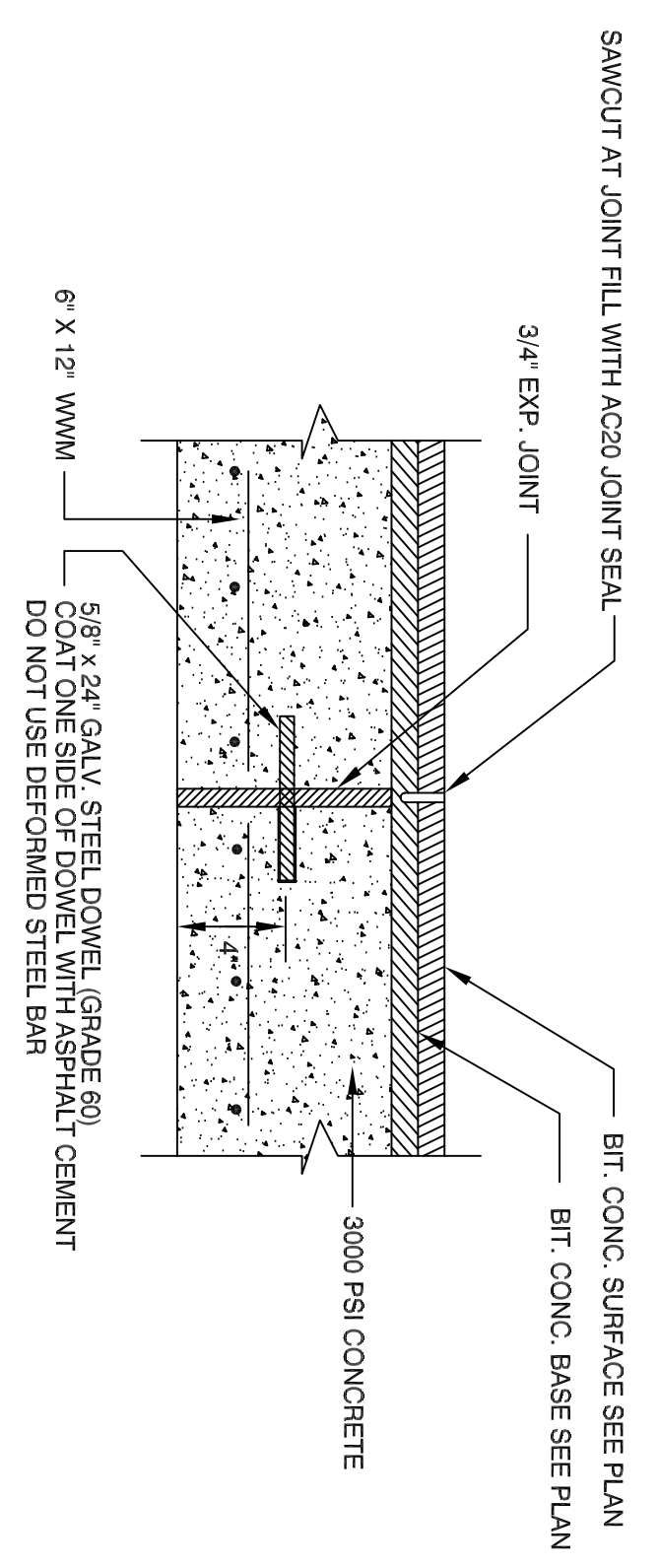
### 2" BITUMINOUS SURFACE ON NEW FOUNDATION



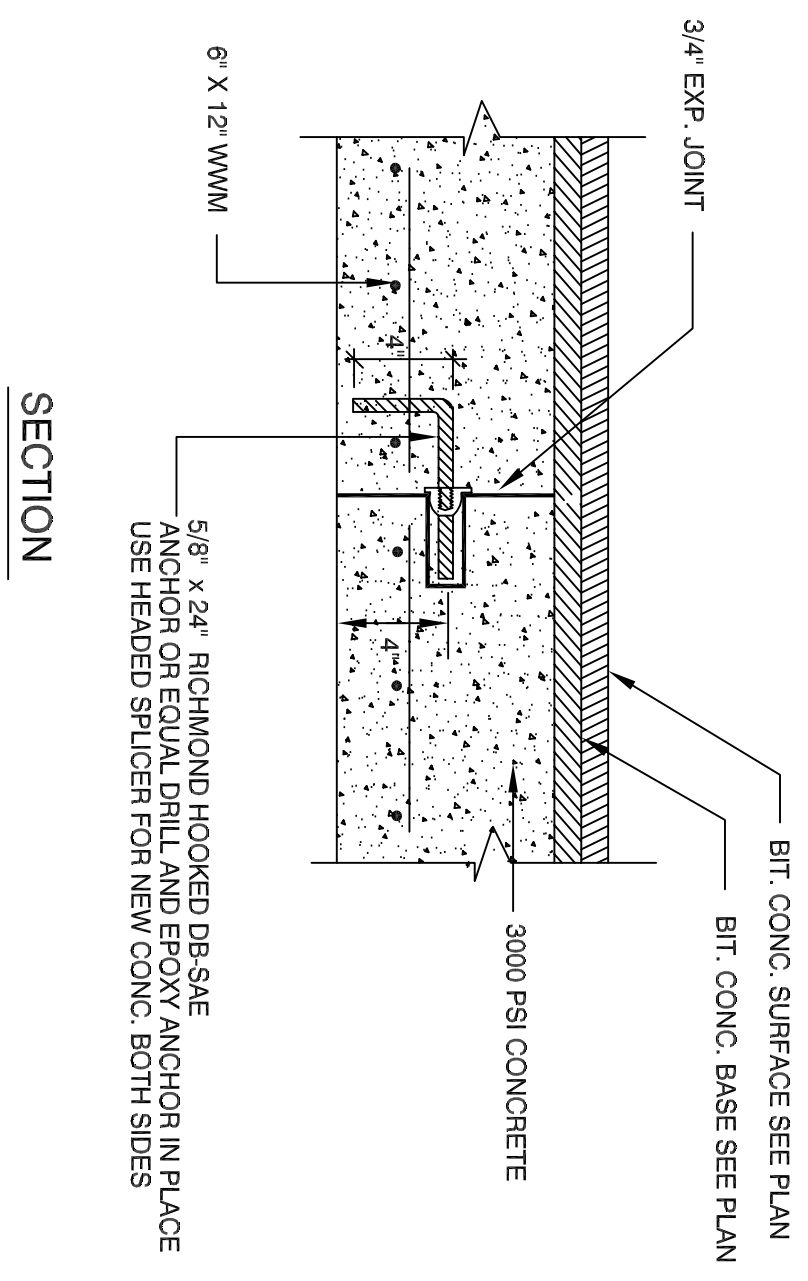
### CURB UNDERDRAIN FOR GRANITE CURB



### CURB UNDERDRAIN FOR BITUMINOUS CURB



### DOWELED TRANSVERSE EXPANSION JOINT IN NEW OR RECONSTRUCTED CONCRETE ROAD BASE



### LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT IN NEW OR RECONSTRUCTED CONCRETE ROAD BASE

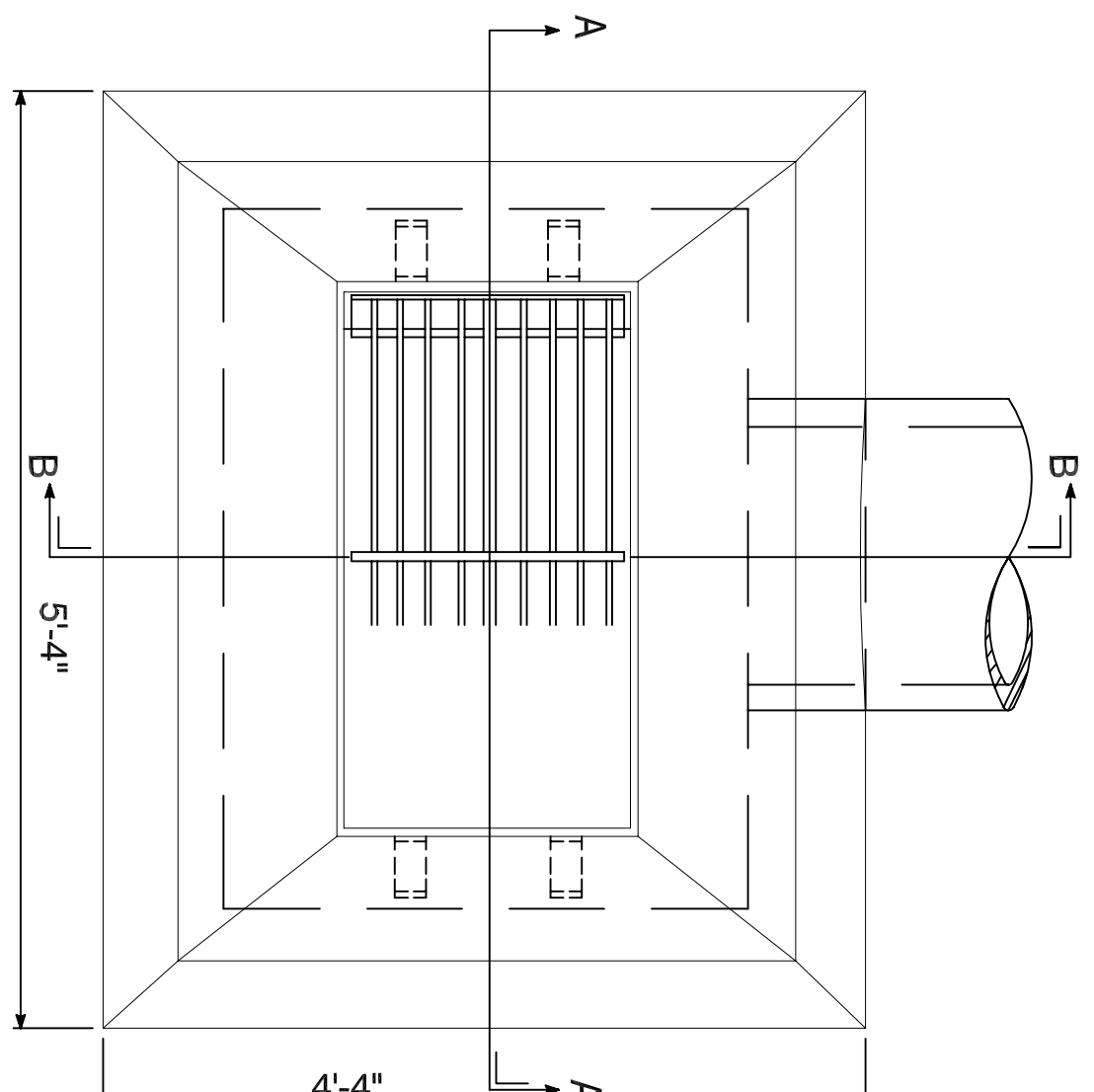
Revisions	By	Date

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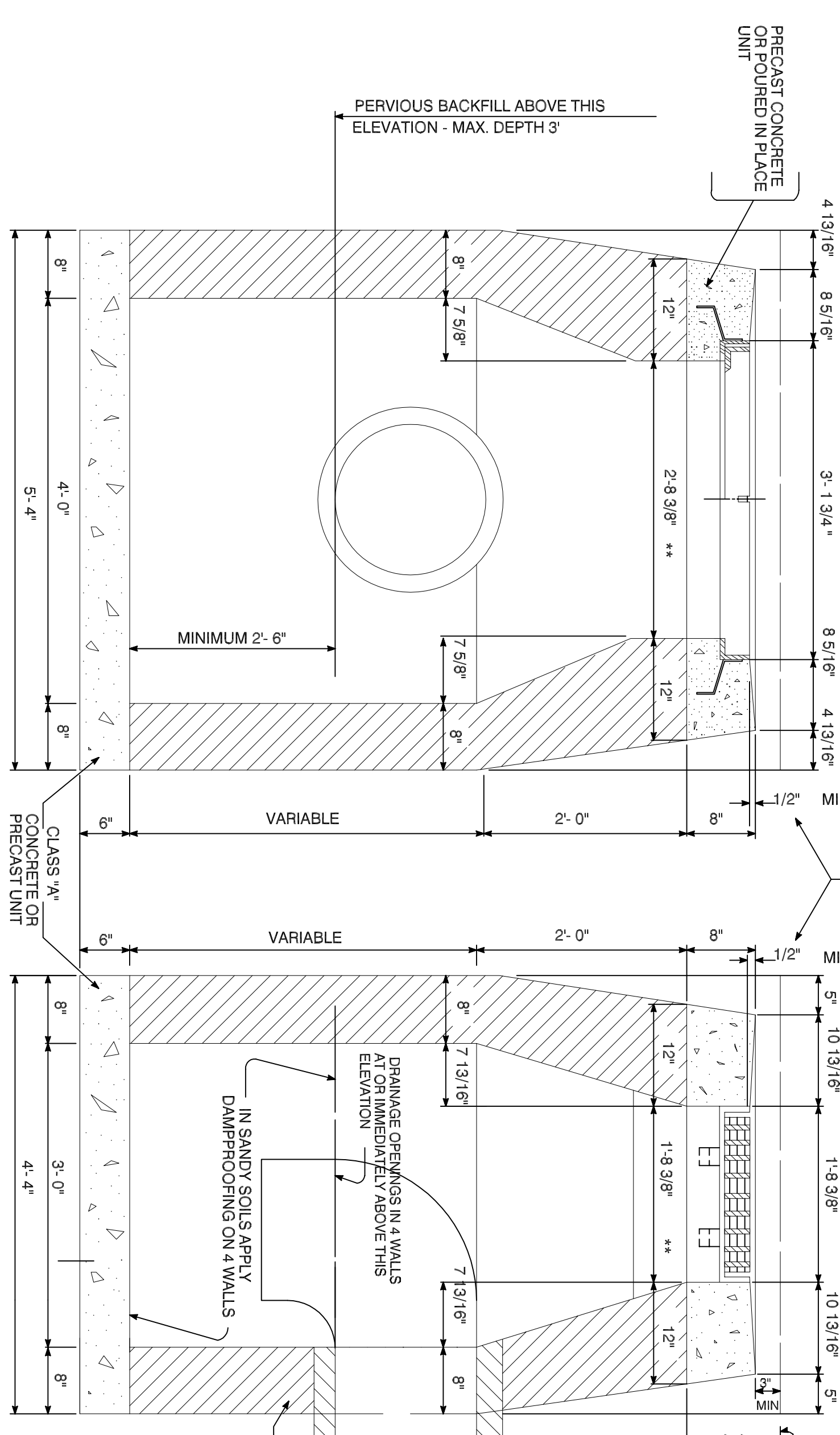
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Standard Drawing No. SR-2	Job No.	Date
		January 2005

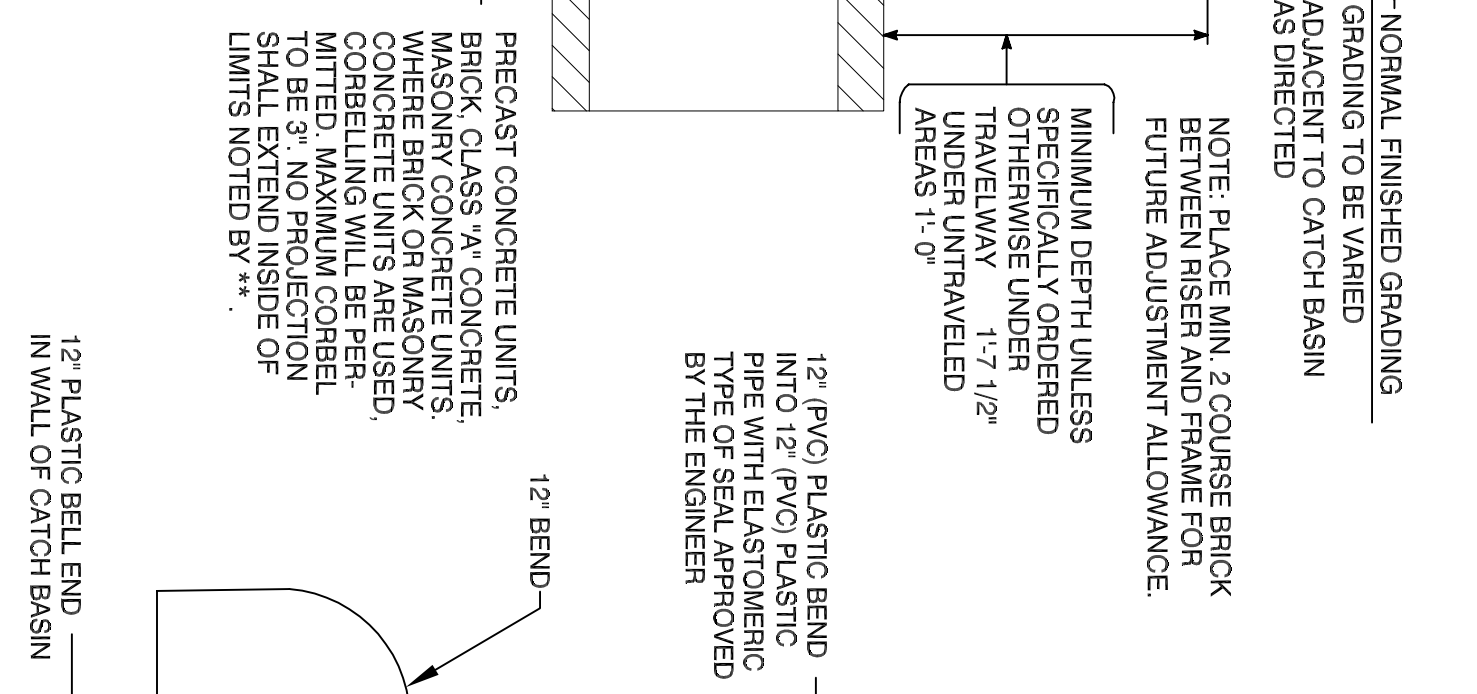




TYPE "CL" CATCH BASIN TOP

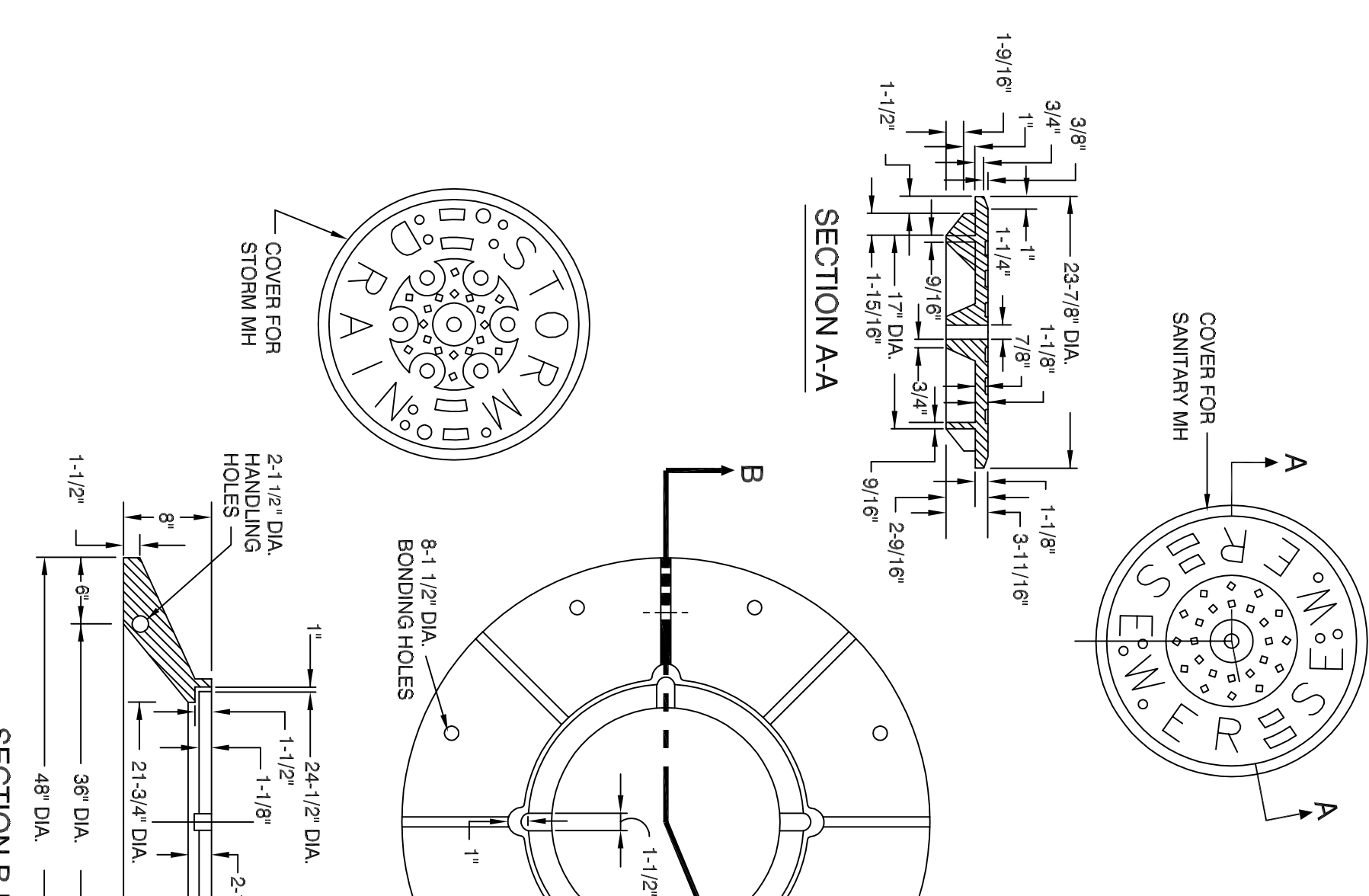
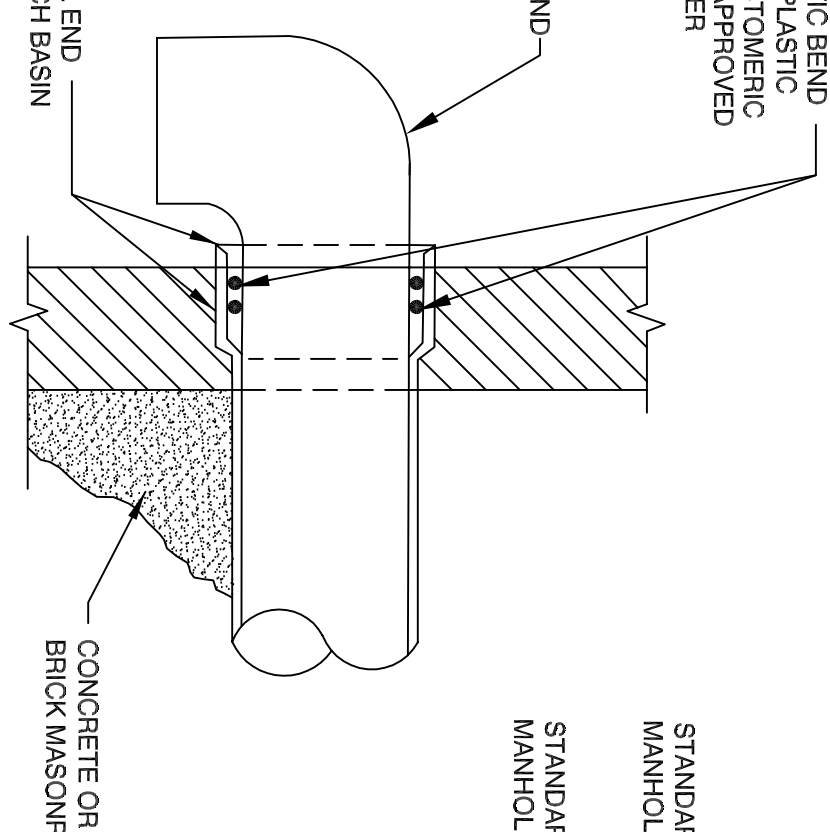


SECTION A-A  
TYPE "CL" CATCH BASIN

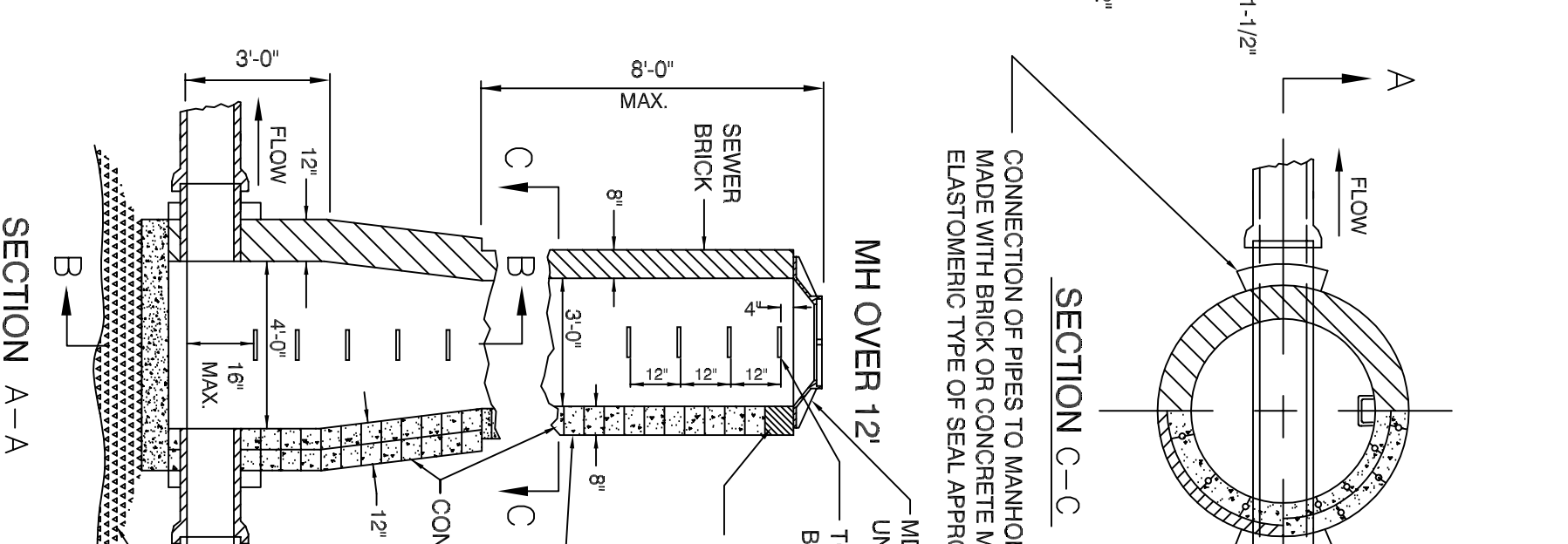
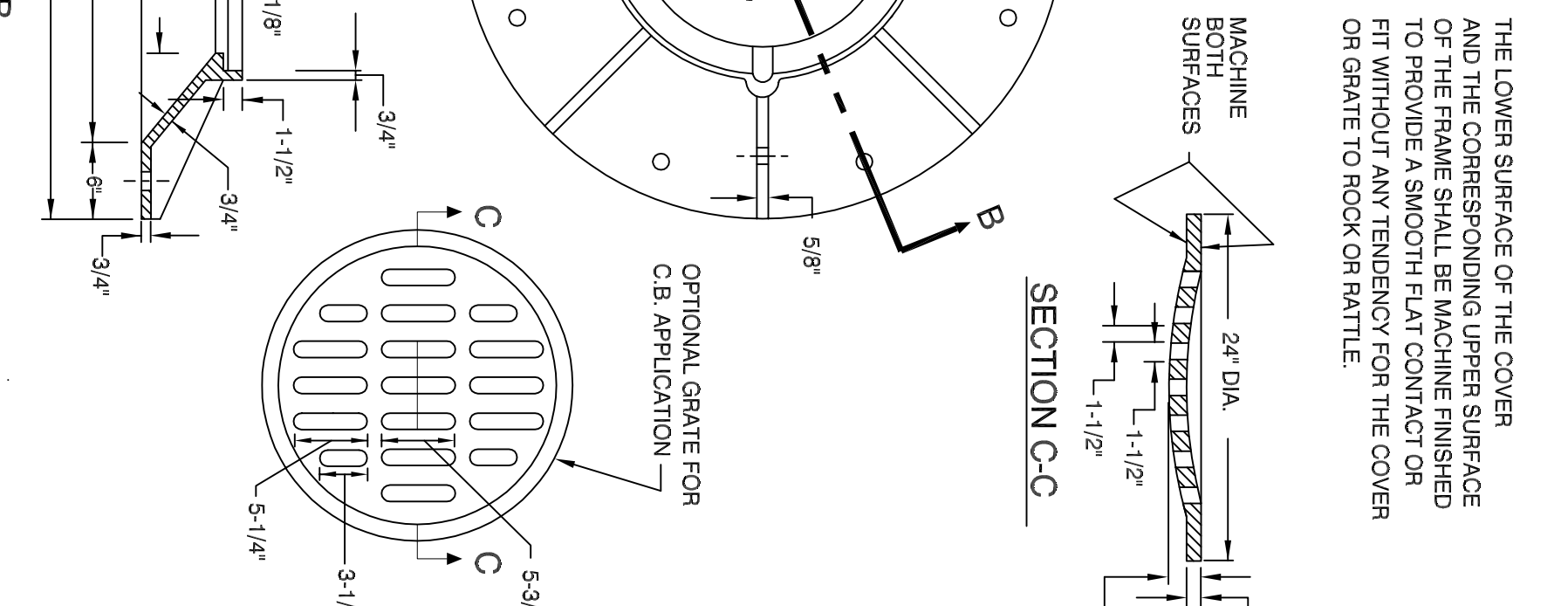


SECTION B-B

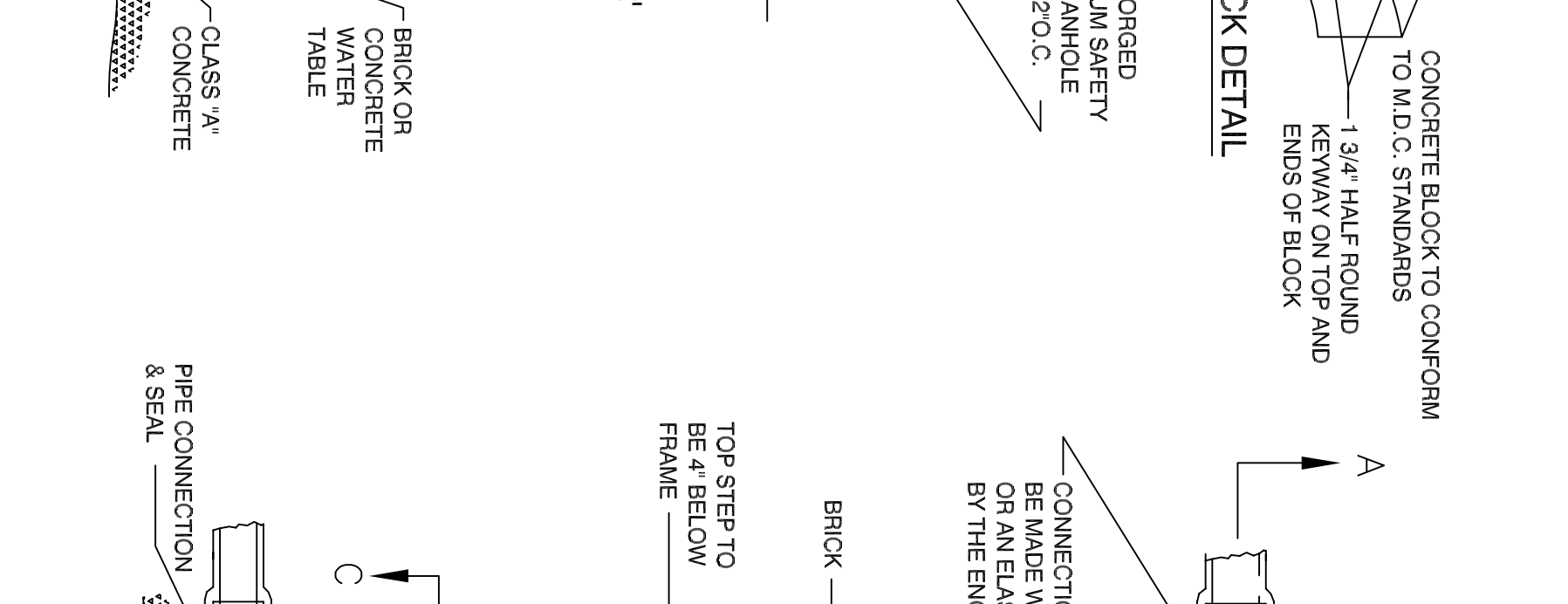
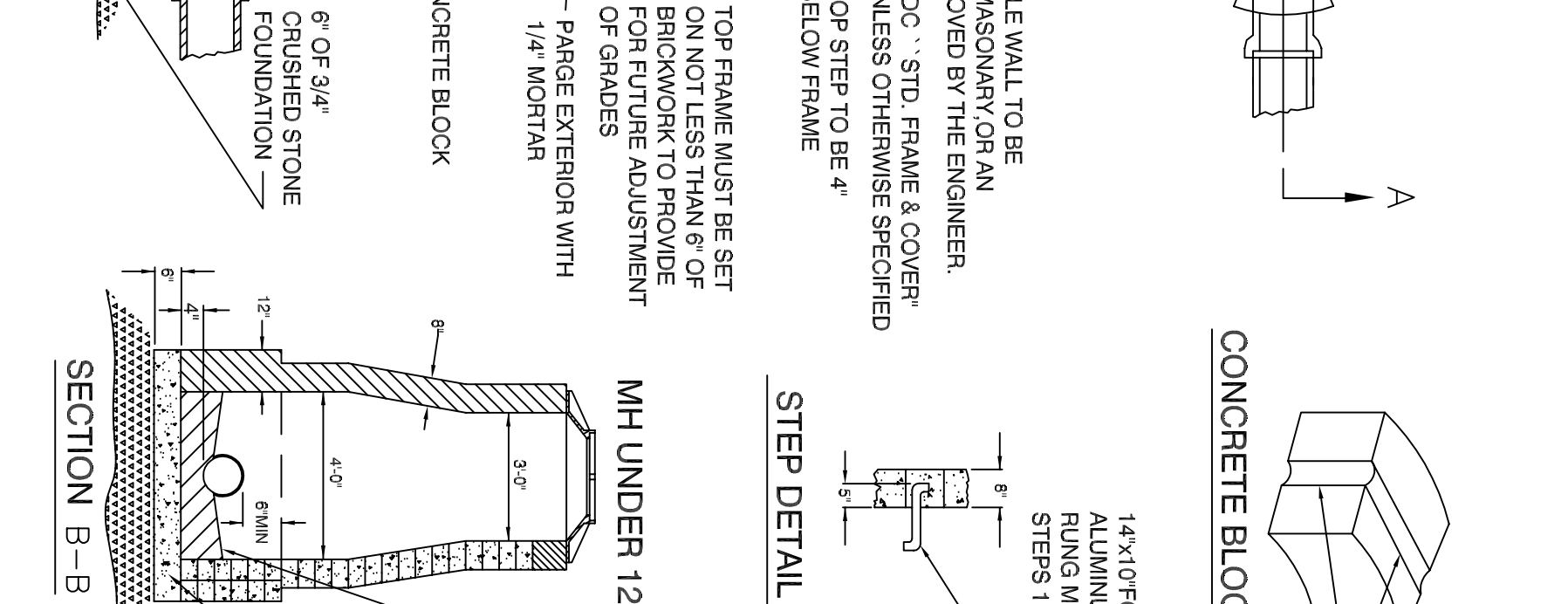
DETAIL FOR 90° ELBOW TRAP



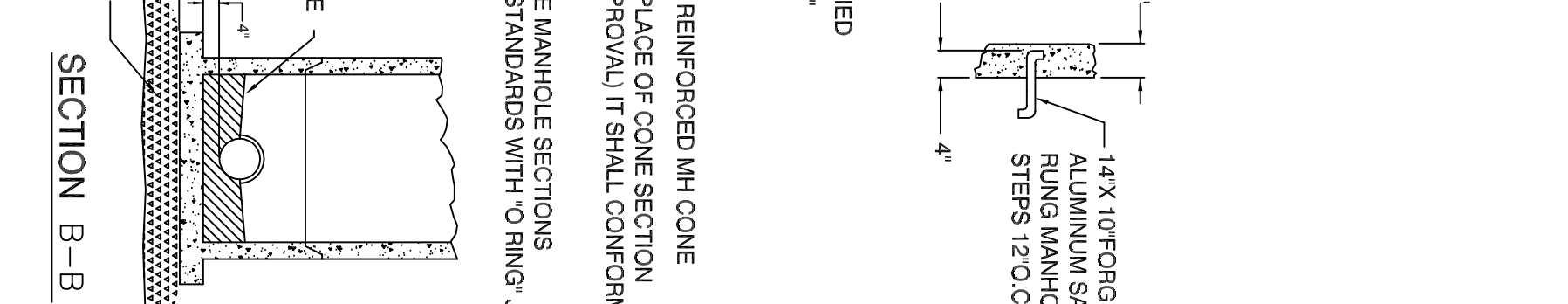
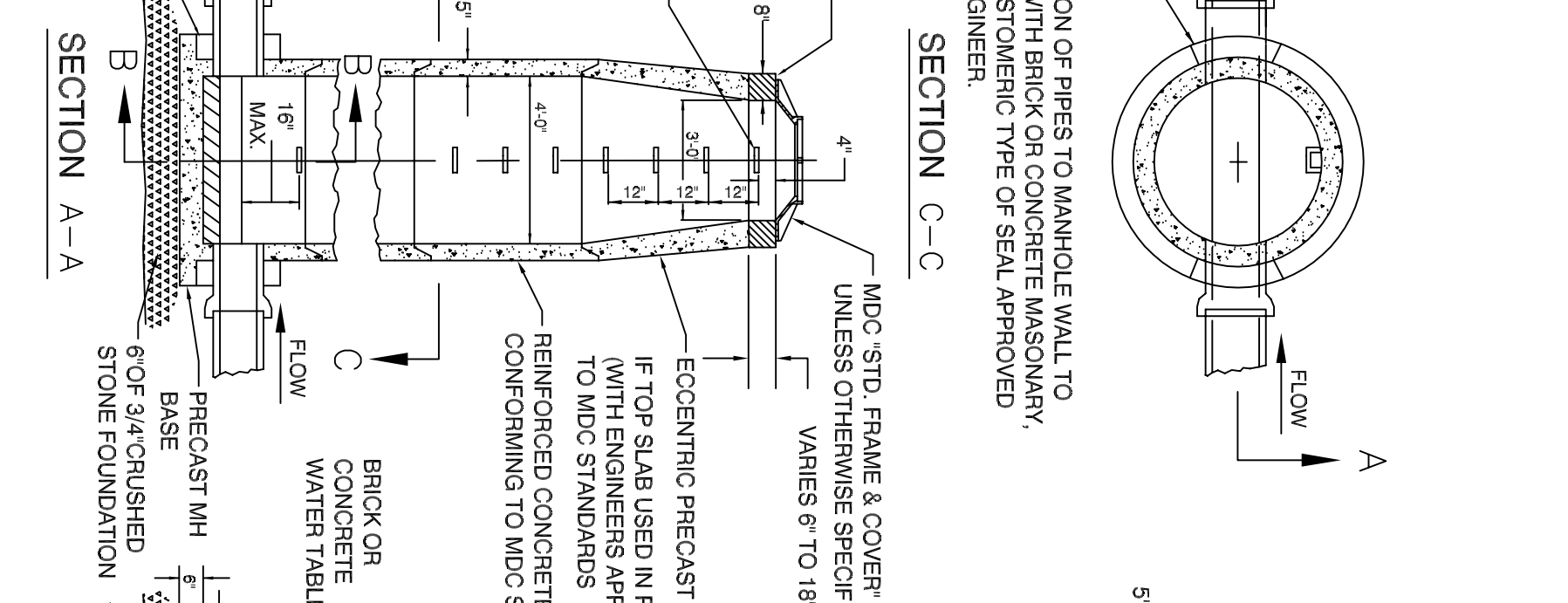
STANDARD MANHOLE FRAME AND COVER



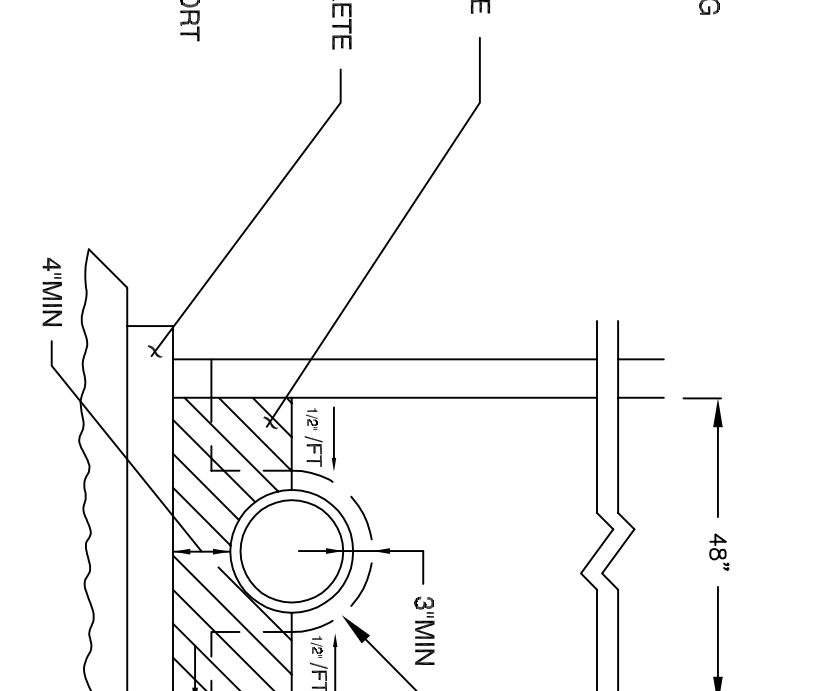
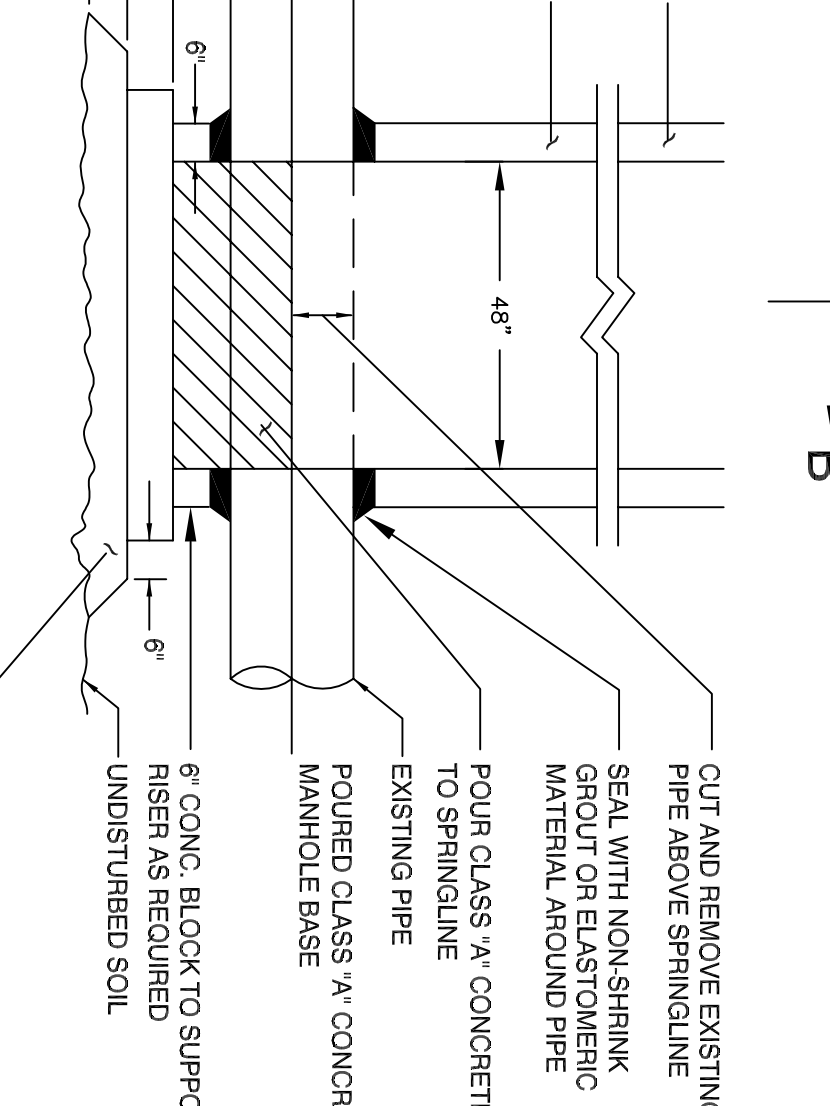
TYPE I MANHOLE  
TYPICAL PRECAST MANHOLE



TYPE II MANHOLE  
TYPICAL PRECAST MANHOLE



SPECIAL MANHOLE DETAIL



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Standard Drawing No. SR-3

Job No.

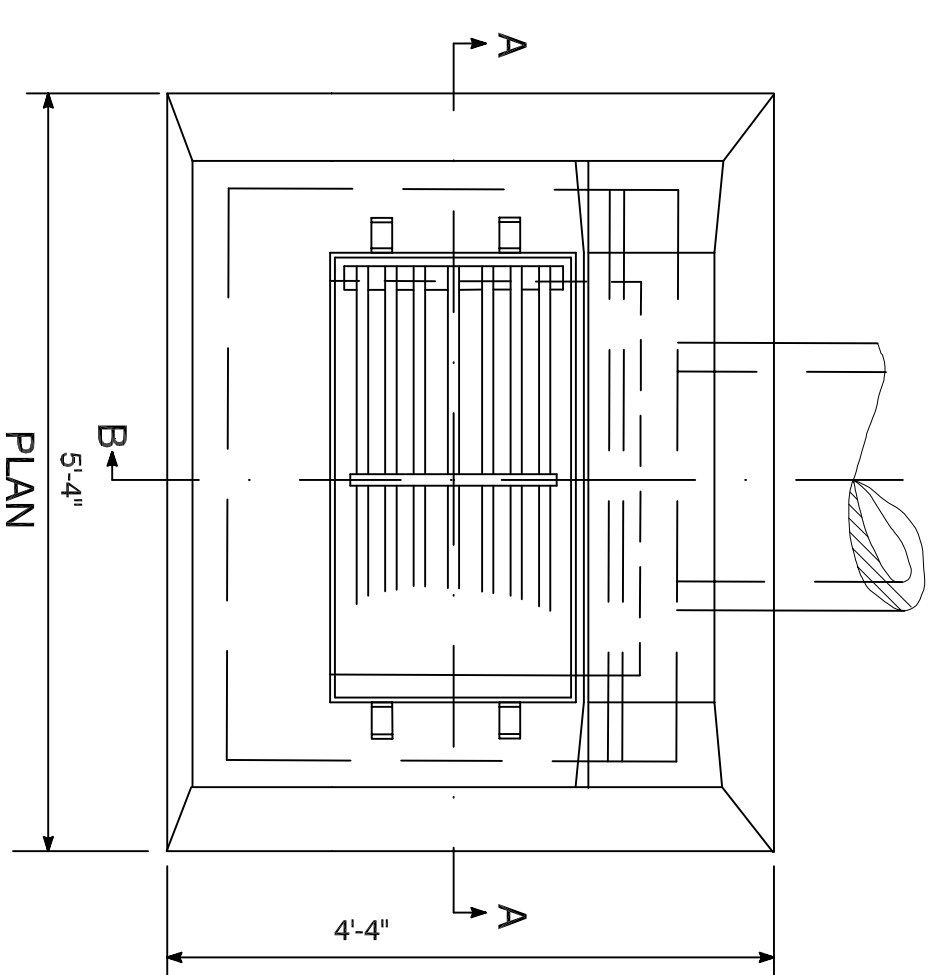
Date January 2005



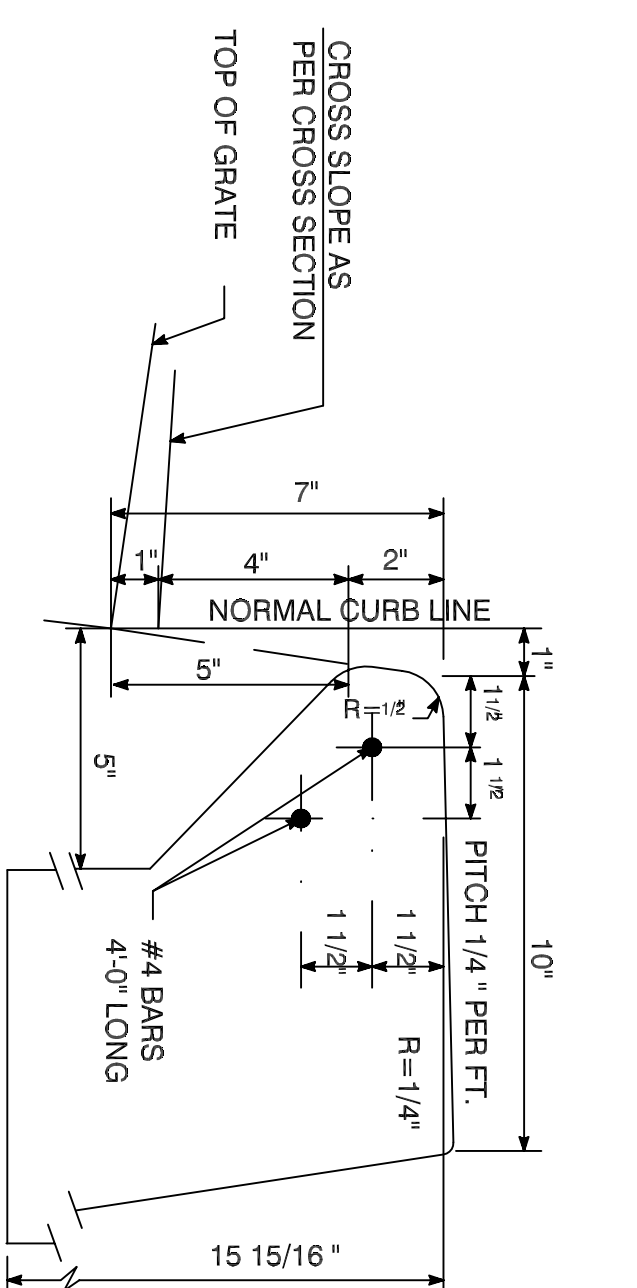
City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Catch Basins and Manholes



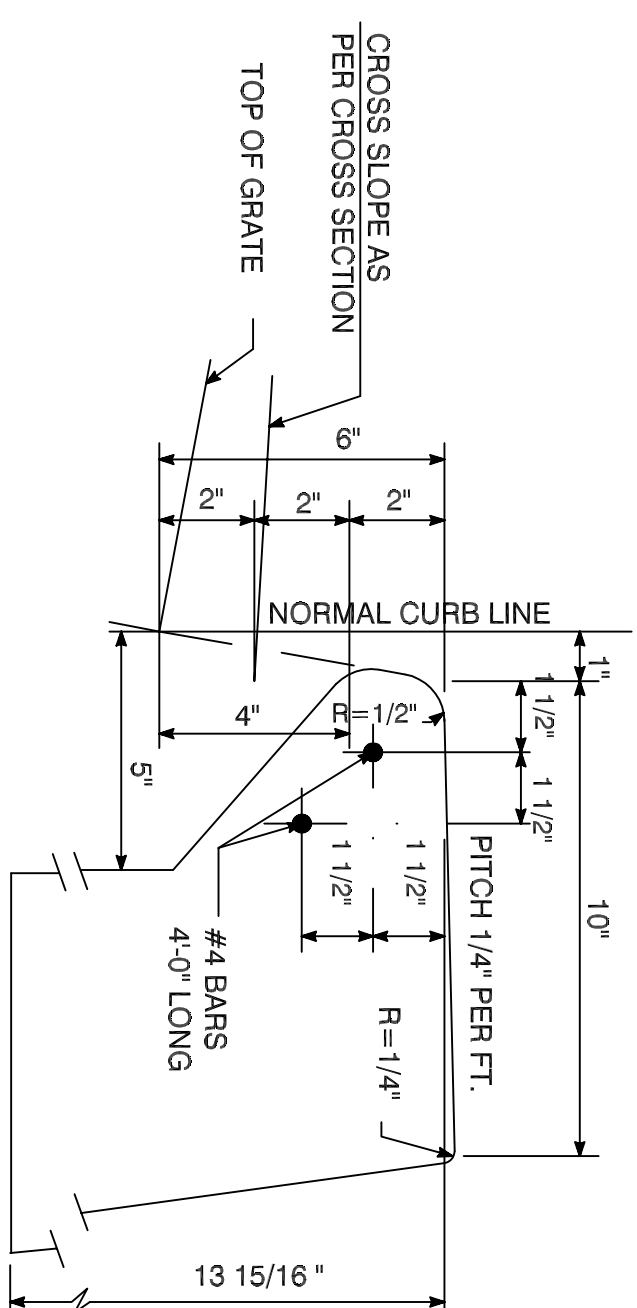
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SR-3.DWG



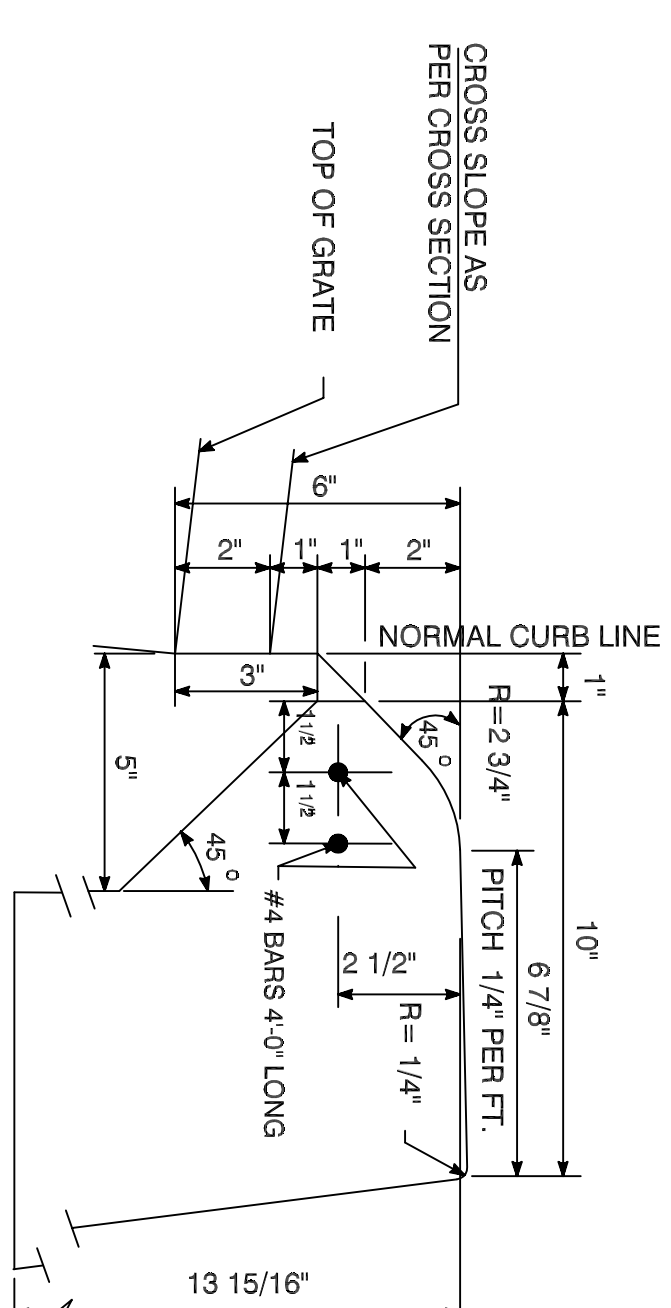
NOTE: WHEN CATCH BASIN IS SET IN CONCRETE PAVEMENT THE 1/2" SLOPE ON THE TOP SURFACE SHALL BE CHANGED TO MATCH ADJOINING PAVEMENT.



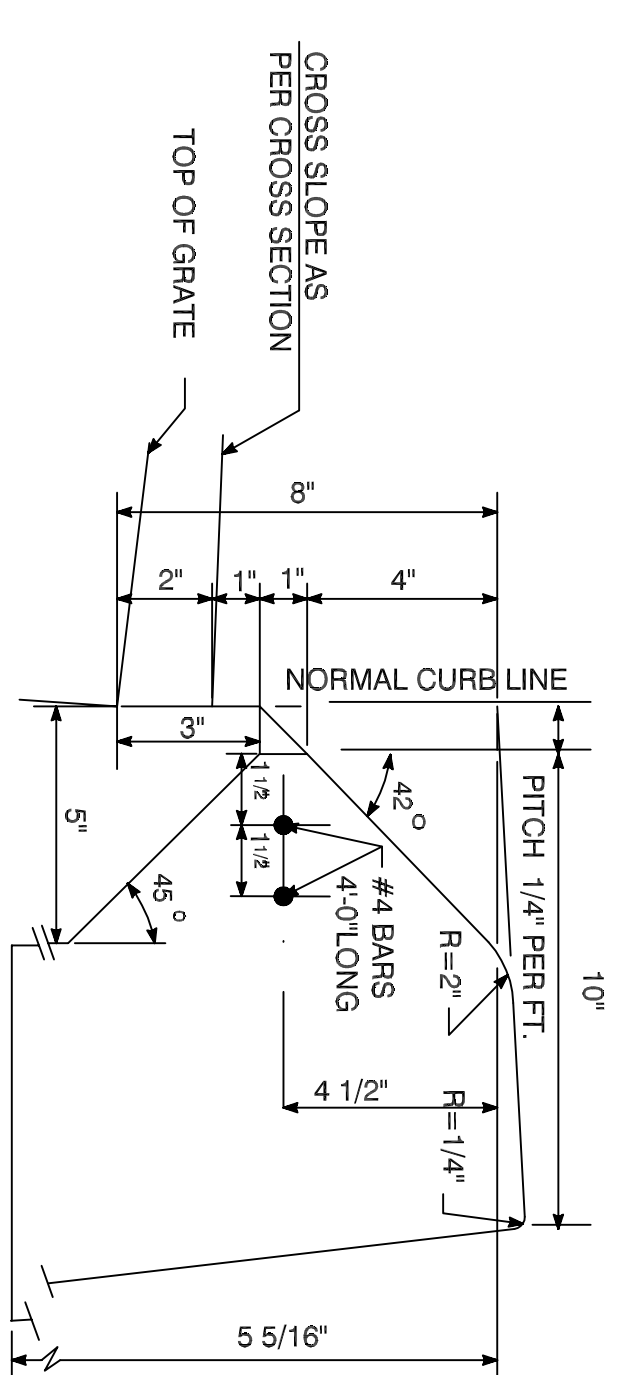
TO BE USED WHEN CURB INLETS IS CONSTRUCTED IN A LINE OF PLAIN CONCRETE CURBING, DOWELED CONCRETE CURBING, OR STONE CURBING, 6" HIGH.



TO BE USED WHEN CURB INLET IS CONSTRUCTED WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED.

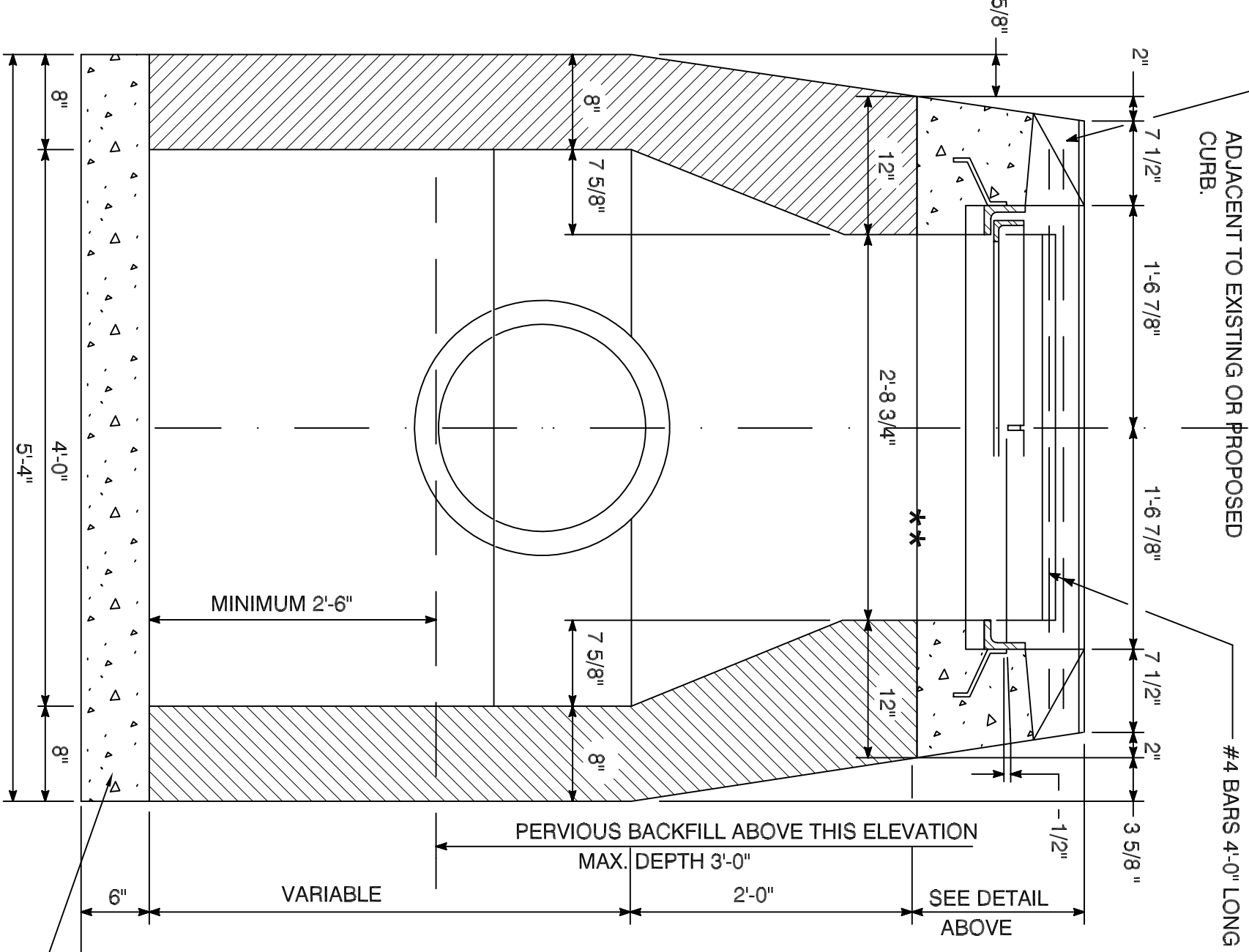


TO BE USED WHEN CURB INLET IS CONSTRUCTED IN A LINE OF CONCRETE PARK CURBING OR DOWELED CONCRETE PARK CURBING, 4" HIGH.

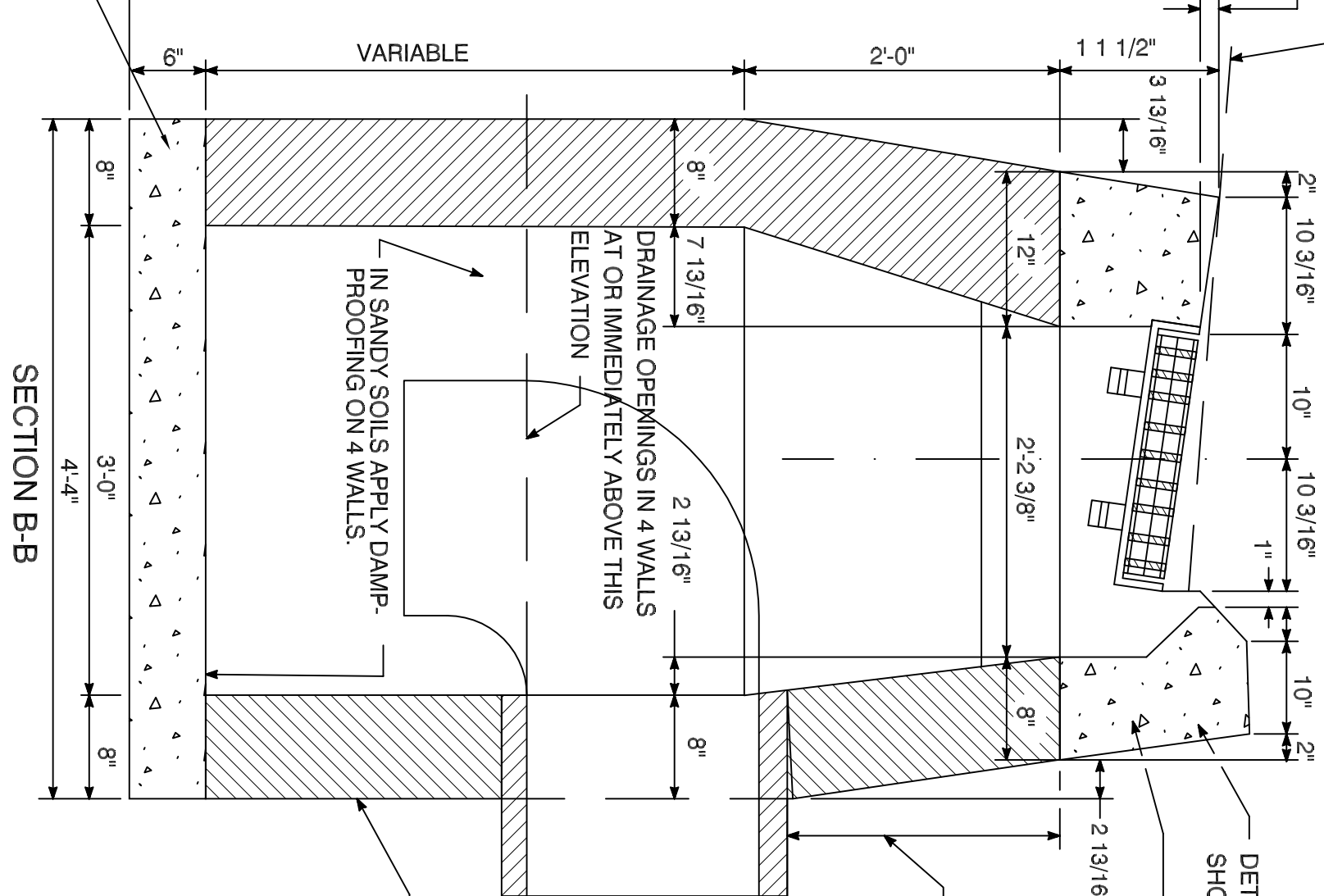


TO BE USED WHEN CURB INLET IS CONSTRUCTED IN A LINE OF BRITANNIUS CONCRETE LIP CURBING, 6" HIGH.

ALTERNATE CONSTRUCTION WITH FULL CURB BACK TO BE USED AT LOCATIONS ADJACENT TO EXISTING OR PROPOSED CURB.



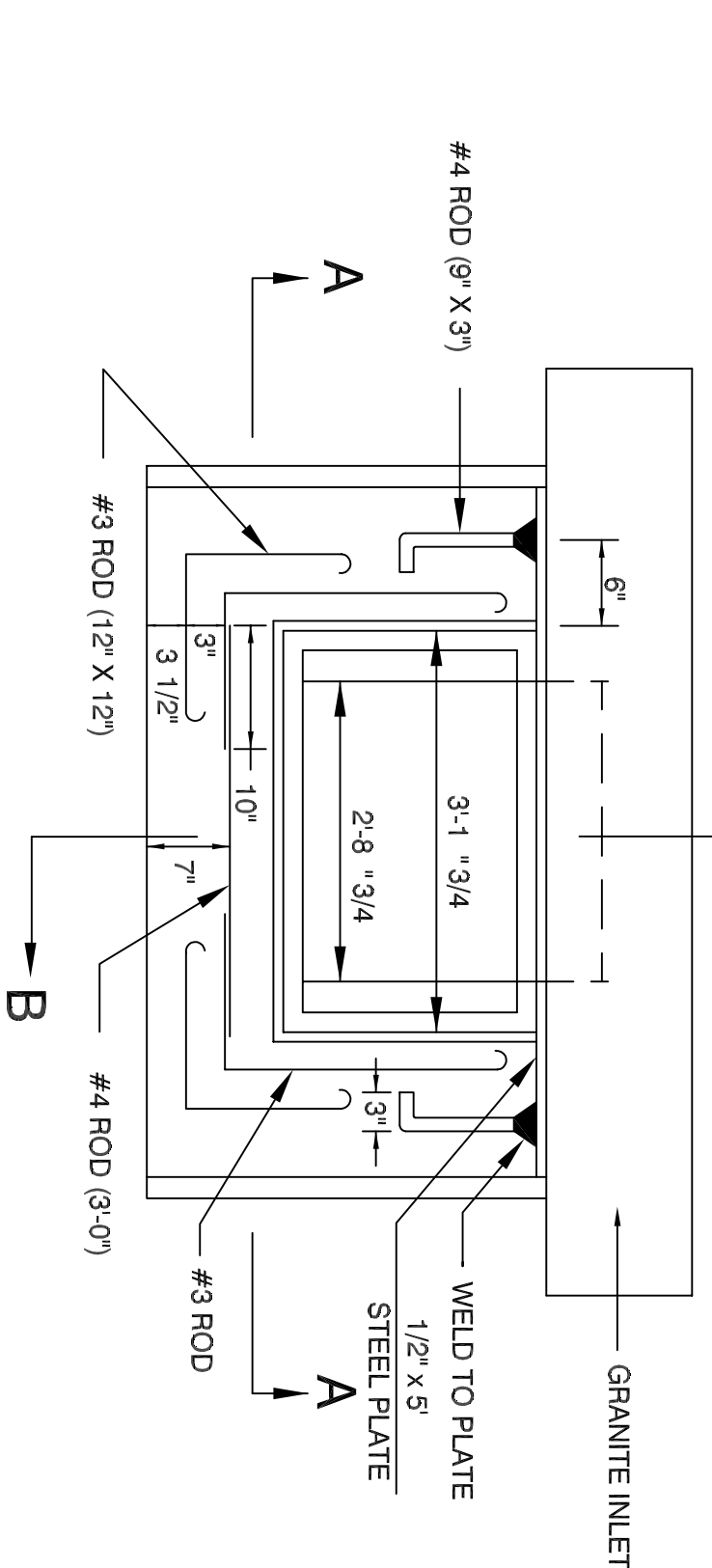
HARTFORD TYPE "C" CATCH BASIN



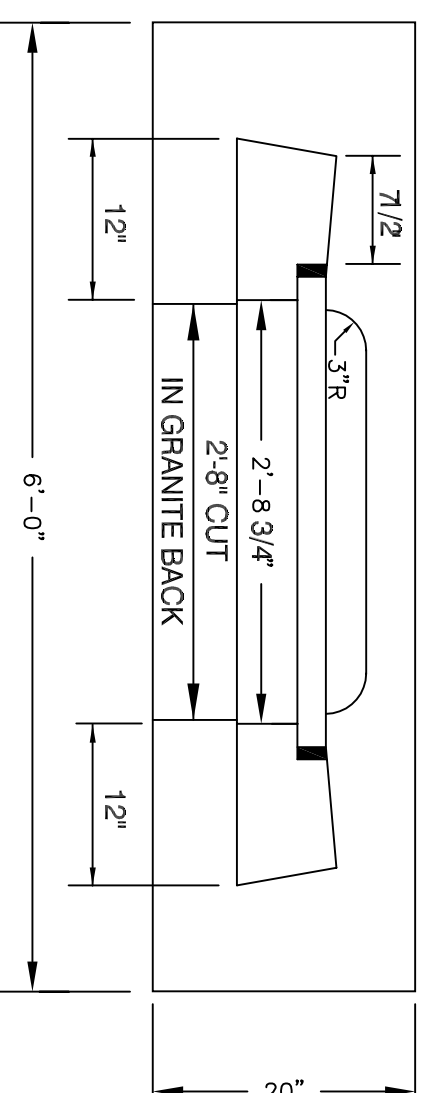
SECTION B-B

PRECAST CONCRETE CURB INLET OR POURED IN PLACE DETAILS SHOWN ABOVE  
NOTE: PLACE MIN. 2 COURSE BRICK BETWEEN RISER AND TOP FOR FUTURE ADJUSTMENT ALLOWANCE  
MINIMUM DEPTH UNLESS SPECIFICALLY ORDERED OTHERWISE UNDER TRAVELWAY 1'-7 1/2" UNDER UNTRAVELED AREAS 1'-0"

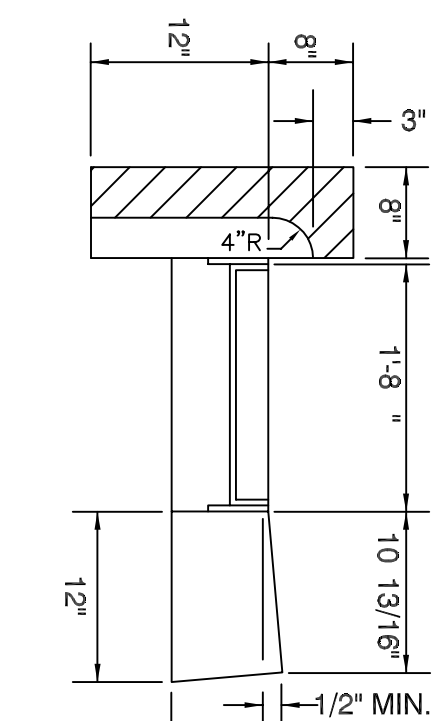
PRECAST CONCRETE UNITS, BRICK CLASS "A" CONCRETE MASONRY CONCRETE UNITS, WHERE BRICK OR MASONRY CONCRETE UNITS ARE USED, CORRELLING WILL BE PERMITTED. MAXIMUM CORREL TO BE 3" NO PROJECTION. SHALL EXTEND INSIDE OF LIMITS NOTED BY \*\*



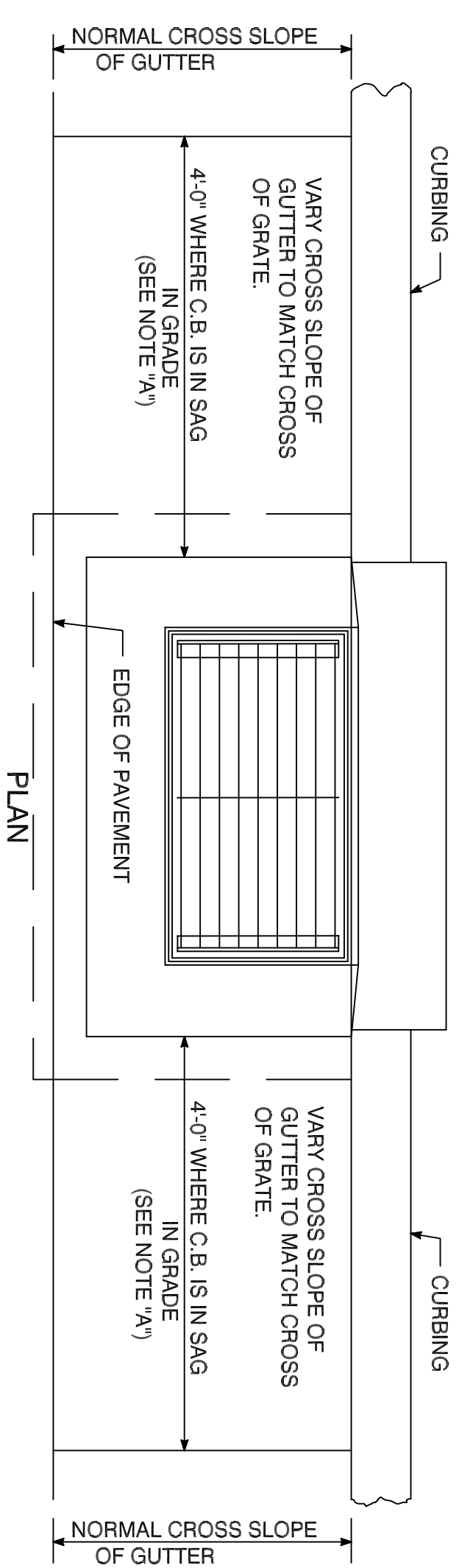
GRANITE CURB CATCH BASIN INLET



SECTION A-A



SECTION B-B



FOR CATCH BASINS IN A LINE OF CONCRETE PARK CURBING OR DOWELED CONCRETE PARK CURBING 4" HIGH

FOR CATCH BASINS WHERE NO CURBING OF ANY TYPE EXIST OR IS PROPOSED

FOR CATCH BASINS IN A LINE OF PLAIN CONCRETE CURBING, DOWELED CONCRETE CURBING OR GRANITE CURBING 6" HIGH

NOTE "A" 6'-0" ON UPGRADE SIDE OF CONTINUOUS GRADE, 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED

DETAILS OF DEPRESSED GUTTER STRIP

NOTES

FOR ADDITIONAL DETAILS SEE SHEET SR-3 & SR-5.  
CONCRETE TOP WITH CURB INLET OF PARK CURB TYPE OR PLAIN TYPE SHALL ONLY BE USED ON TYPE "C" CATCH BASIN WHERE CALLED FOR ON THE DRAWINGS OR ORDERED BY THE ENGINEER.  
IF NOT SPECIFIED ON THE PLANS TO BE CONSTRUCTED AS DIRECTED BY THE ENGINEER.  
WHERE TYPE "C" CATCH BASIN IS CONSTRUCTED IN PAVEMENT AREA, THE NORMAL CROSS SLOPE OF THE GUTTER SHALL MATCH NORMAL CROSS SLOPE OF GRATE. DETAILS ARE SHOWN ON THIS SHEET.  
ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT TO BE COVERED WITH A LAYER OF TAR PAPER COST TO BE INCLUDED IN PRICE BID FOR TYPE "C" CATCH BASIN. THE COST OF ALL REINFORCING STEEL SHALL ALSO BE INCLUDED IN SAID BID PRICE.  
WALLS OF ALL CATCH BASINS OVER 10FT. DEEP TO BE INCREASED TO 12" THICKNESS. INSIDE DIMENSIONS TO REMAIN THE SAME. INCLUDE COST IN CATCH BASIN ITEM.

Revisions	By	Date

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Standard Drawing No. SR-4

Job No.

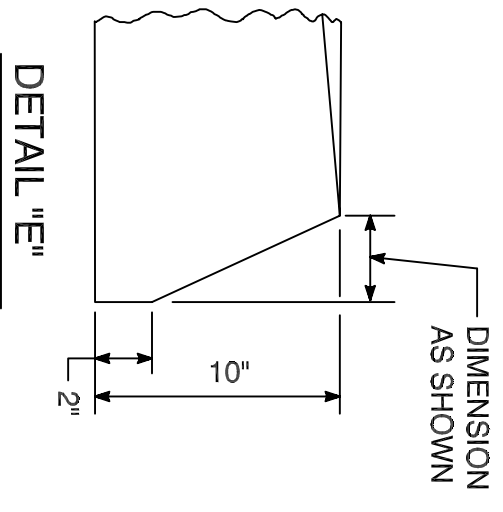
Date January 2005



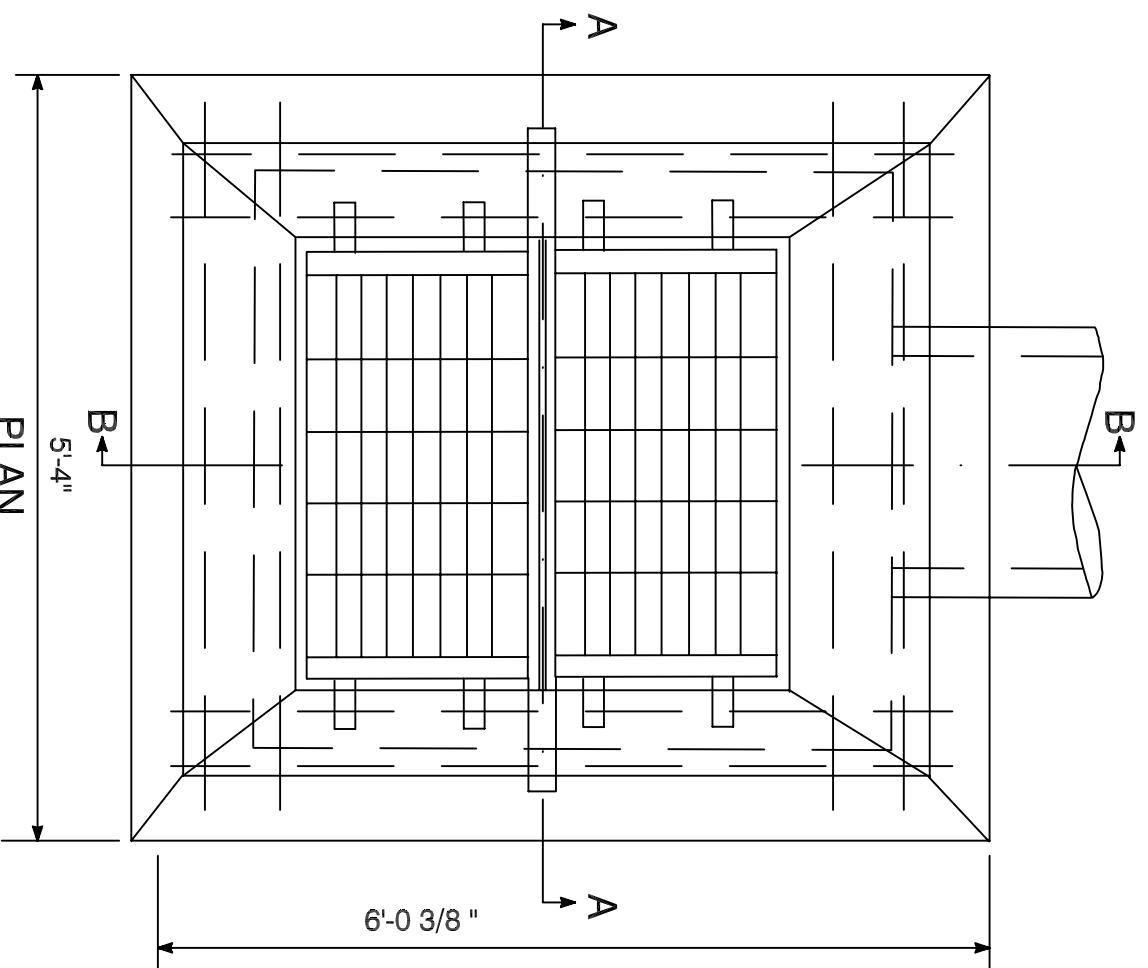
City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Catch Basins



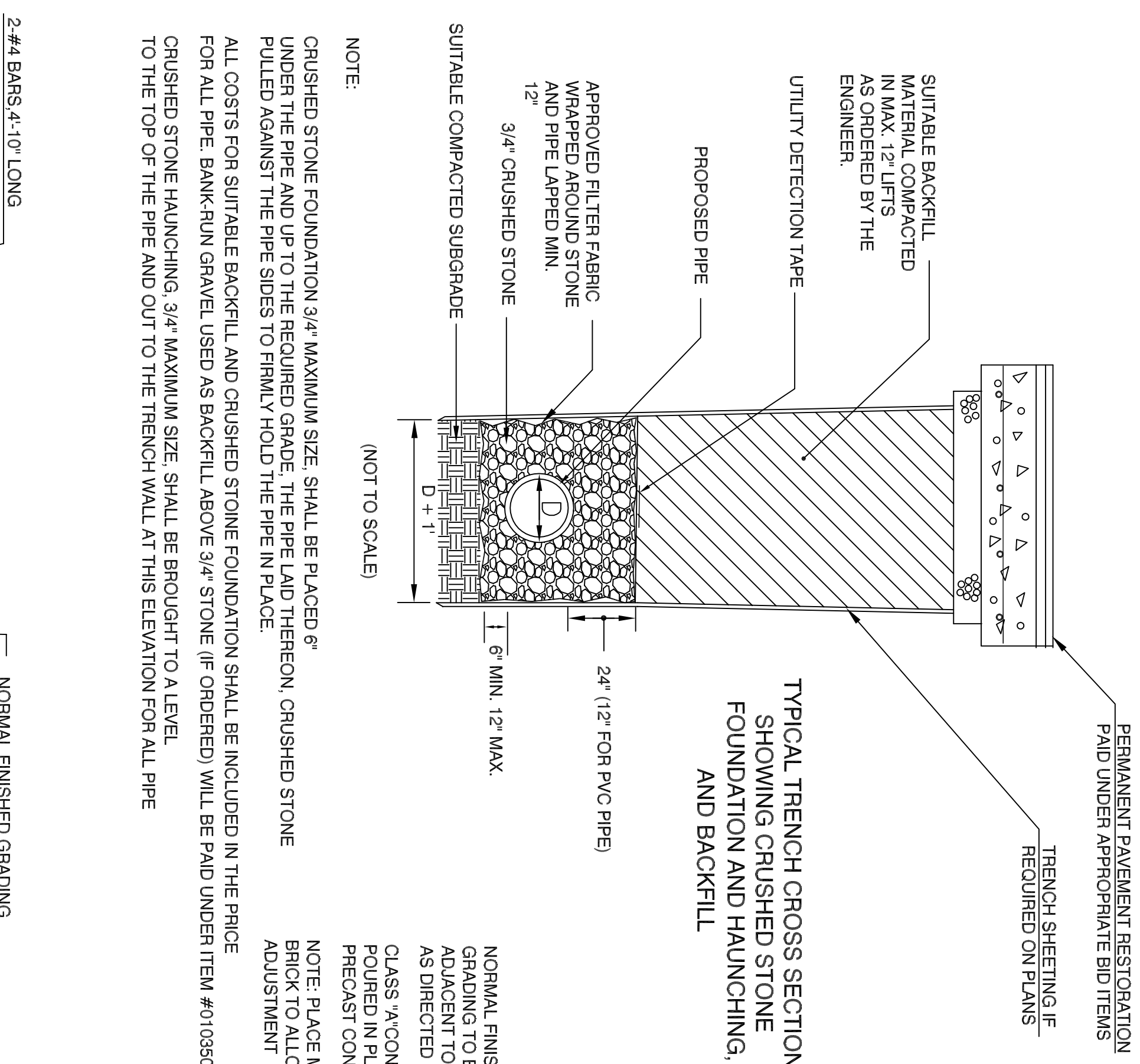
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File Name  
SR-4.DWG



ALTERNATE CONSTRUCTION OF TYPE II TOP

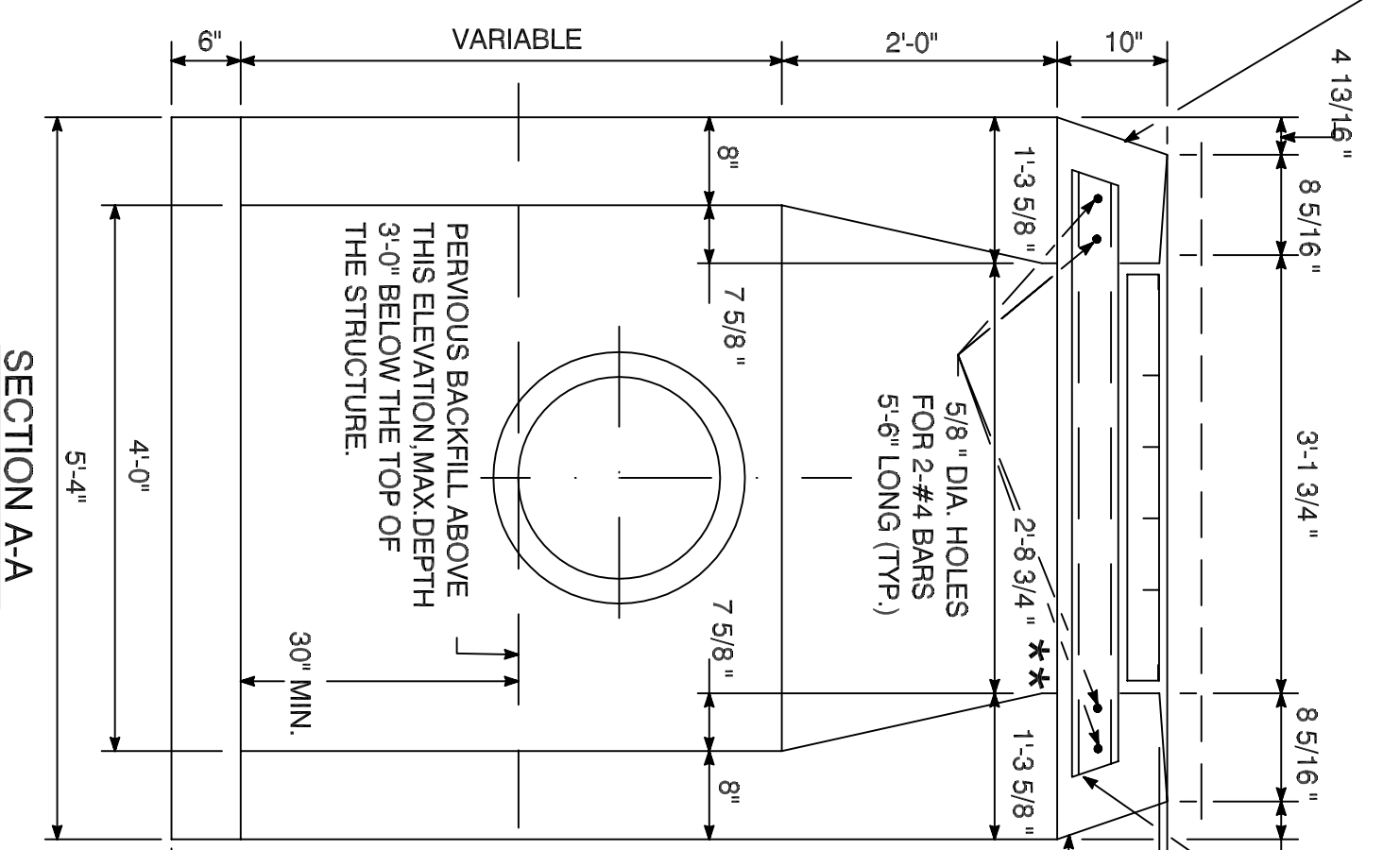


CLASS 'A' CONCRETE  
POURED IN PLACE OR  
PRECAST CONCRETE UNIT.

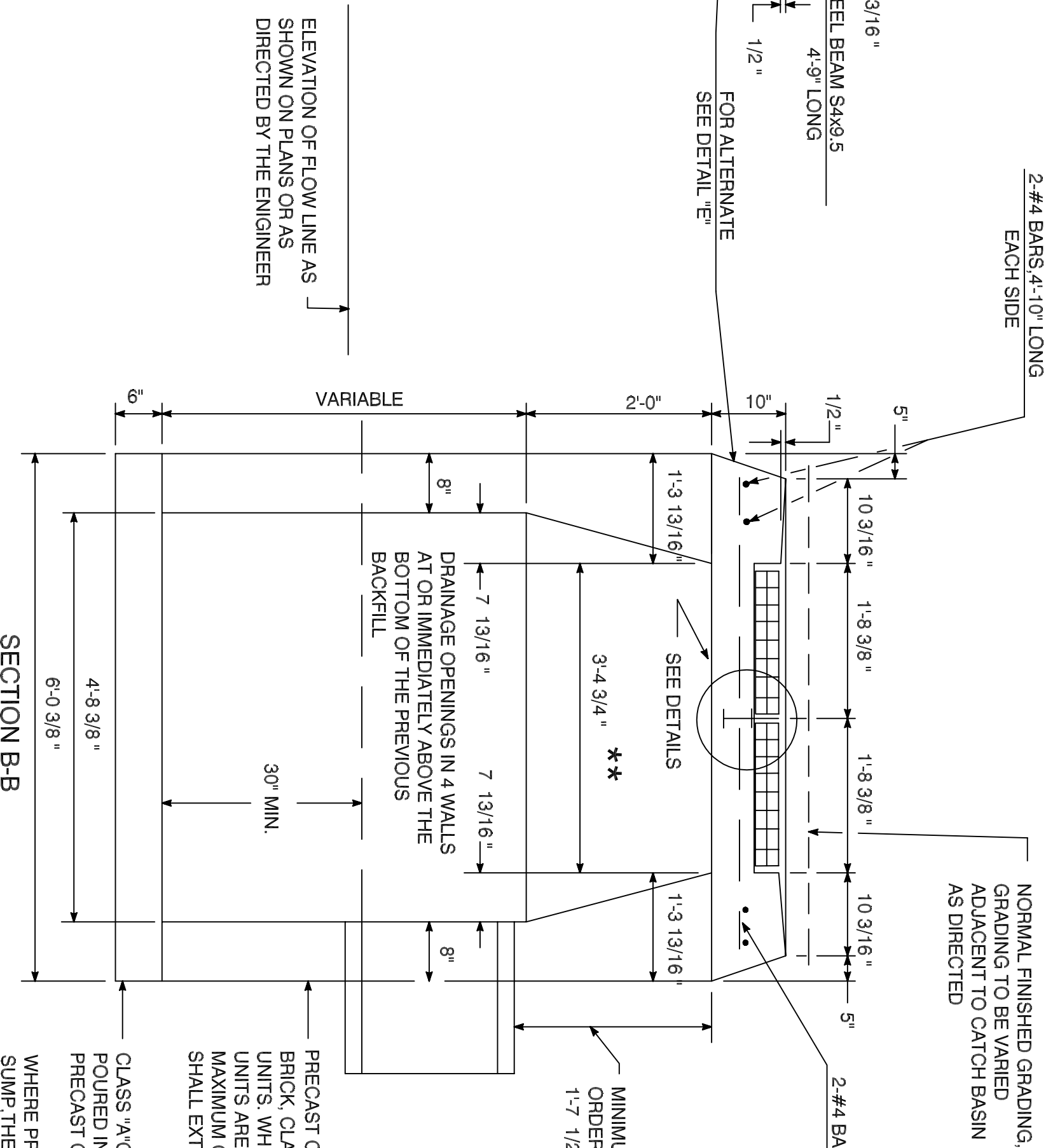


NOTES

- FOR DETAILS OF STEEL FRAME & GRATE SEE STANDARD SHEET NO. SR-5 TWO FRAMES & GRATES REQUIRED FOR EACH CATCH BASIN.
- WALLS OF ALL CATCH BASINS OVER 10 FT. DEEP TO BE INCREASED TO 12" THICKNESS, INSIDE DIMENSIONS TO REMAIN THE SAME.
- ALL STEEL, EXCEPT REINFORCING BARS, SHALL BE GALVANIZED IN ACCORDANCE WITH M.06.03, CT DOT 814A.
- ALL BARS SHALL HAVE 2" COVER.
- MINIMUM DEPTH UNLESS SPECIFICALLY ORDERED OTHERWISE UNDER TRAVELWAY 1'-7 1/2" UNDER UNTRAVELED AREAS 1'-0"



TYPE "CL" CATCH BASIN DOUBLE GRATE - TYPE I

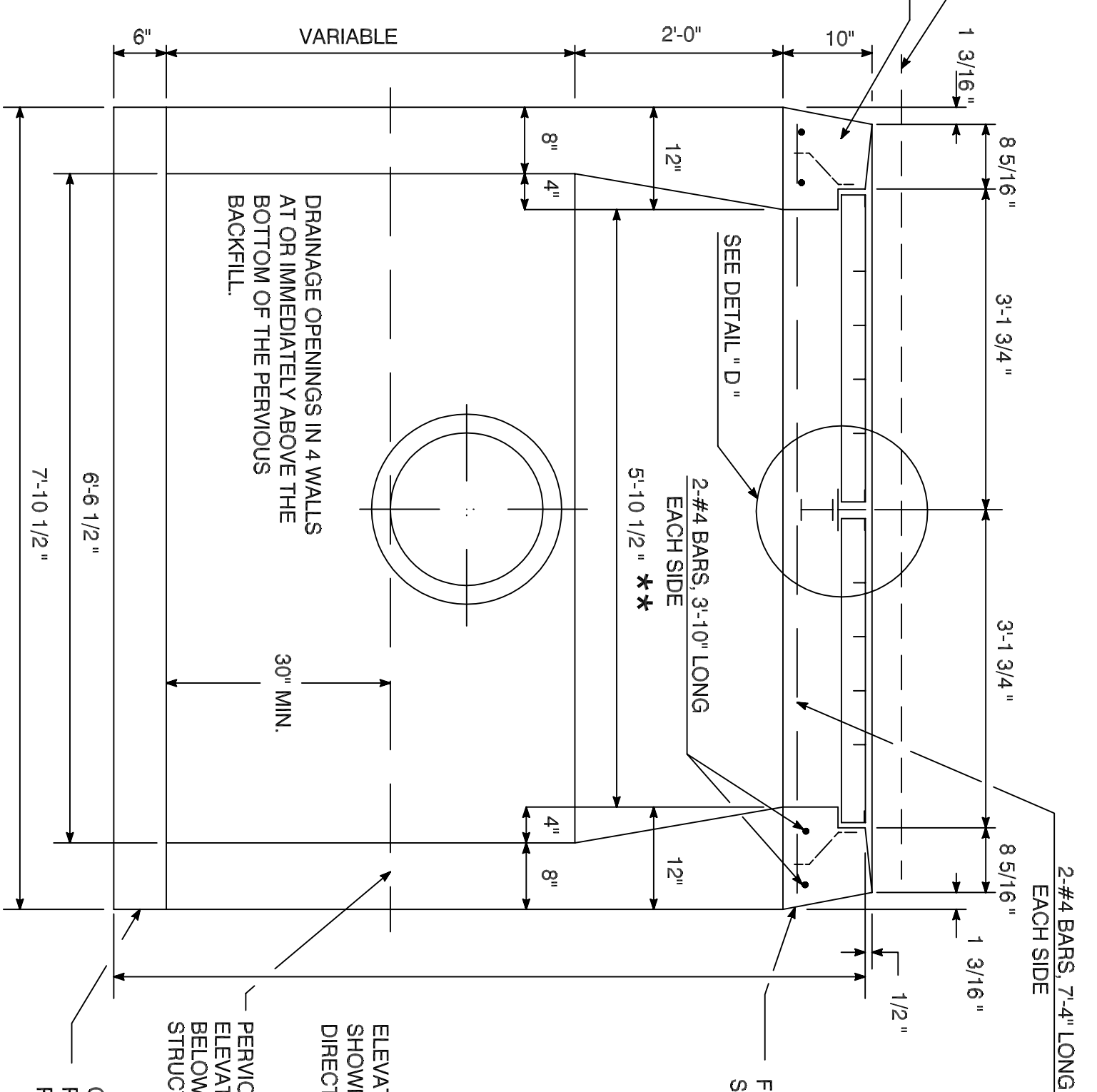
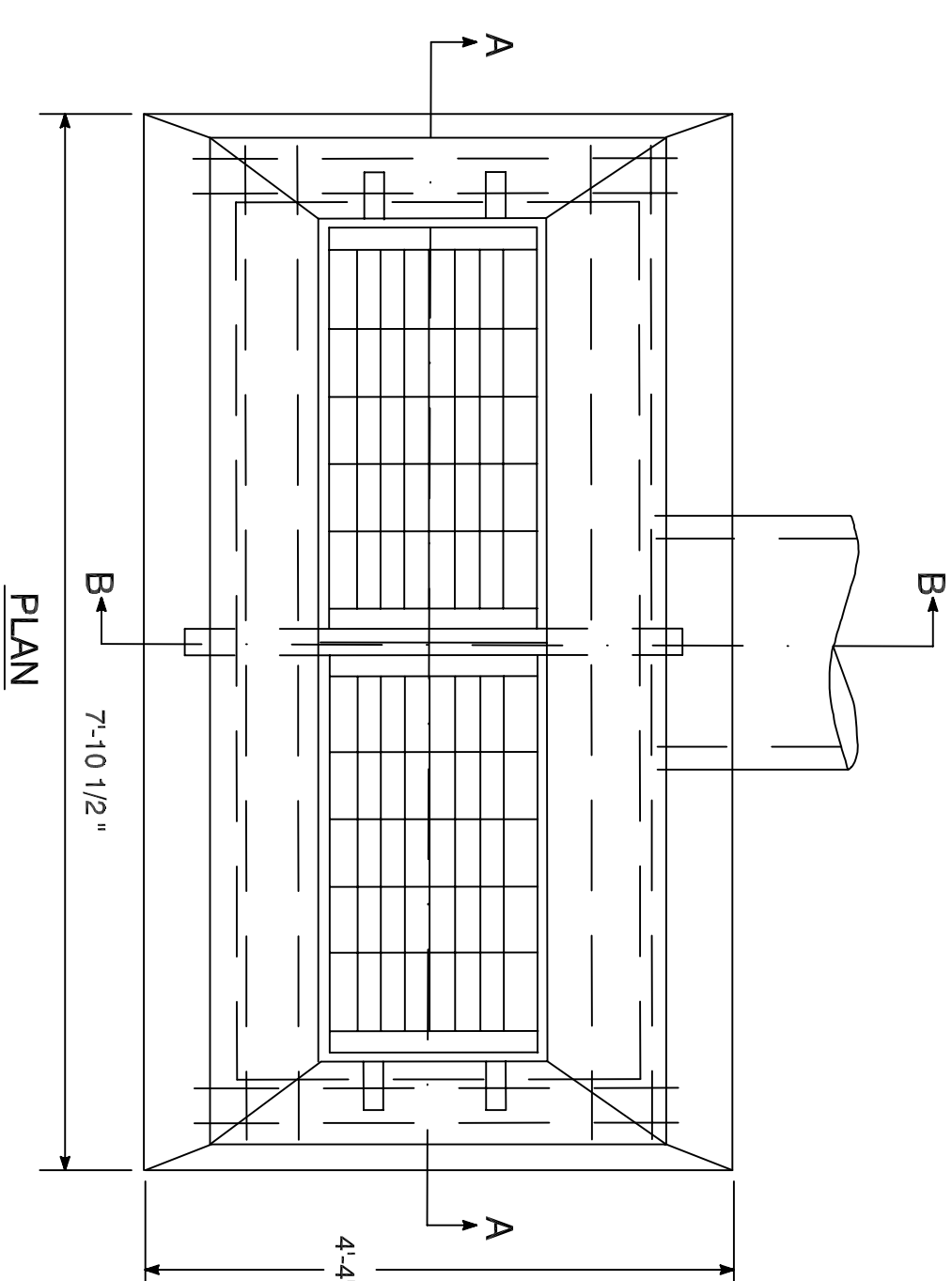


MINIMUM DEPTH UNLESS SPECIFICALLY ORDERED OTHERWISE UNDER TRAVELWAY 1'-7 1/2" UNDER UNTRAVELED AREAS 1'-0"

PRECISE CONCRETE UNITS, BRICK, CLASS 'A' CONCRETE MASONRY CONCRETE UNITS, WHERE BRICK OR MASONRY CONCRETE UNITS ARE USED CORRELLING WILL BE PERMITTED, MAXIMUM CORBEL TO BE 3" NO PROJECTION SHALL EXTEND INSIDE OF LIMITS NOTED BY \*\*

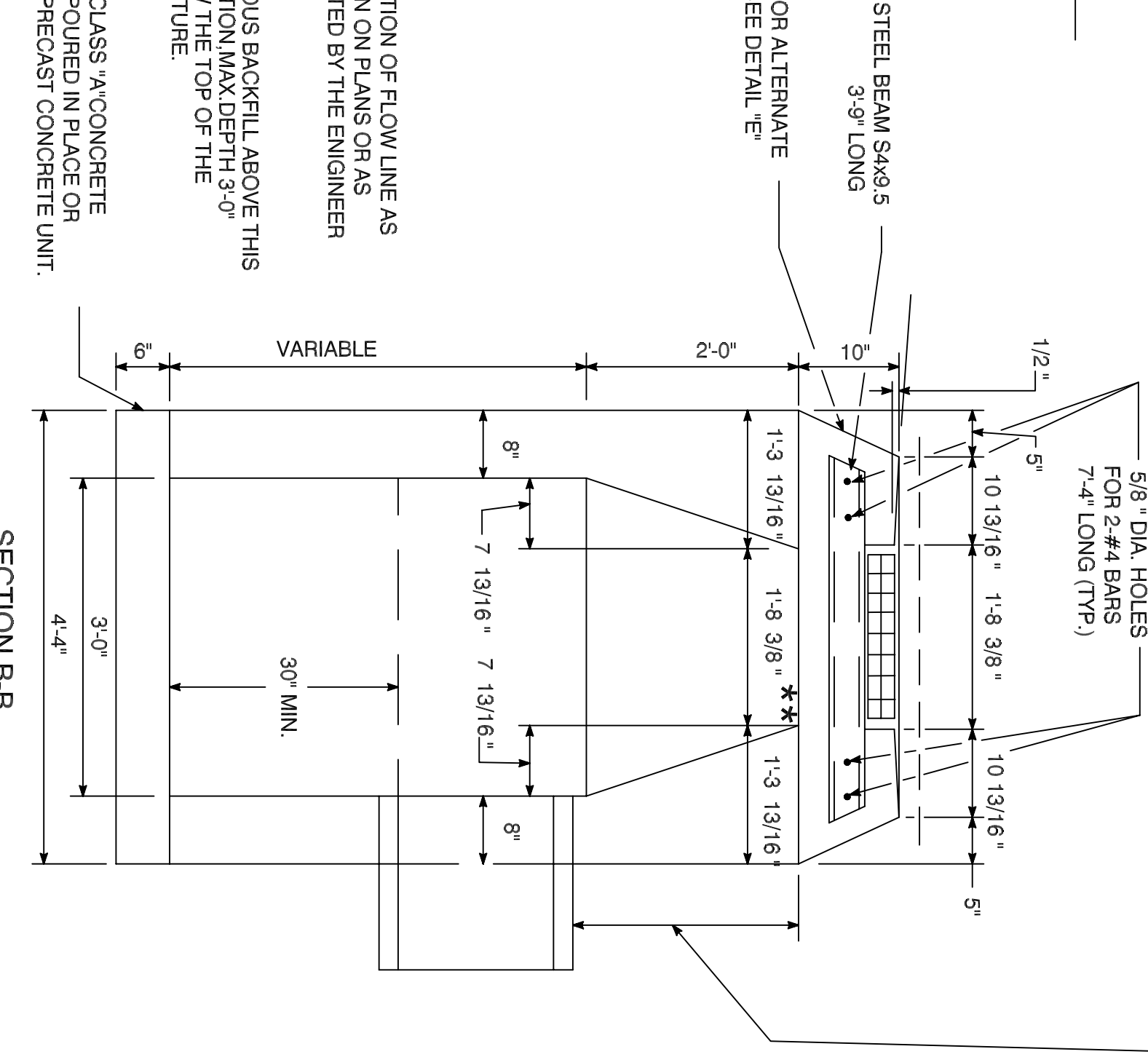
CLASS 'A' CONCRETE POURED IN PLACE OR PRECAST CONCRETE UNIT

WHERE PRECAST CONCRETE UNIT IS USED FOR SLIMP THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN.

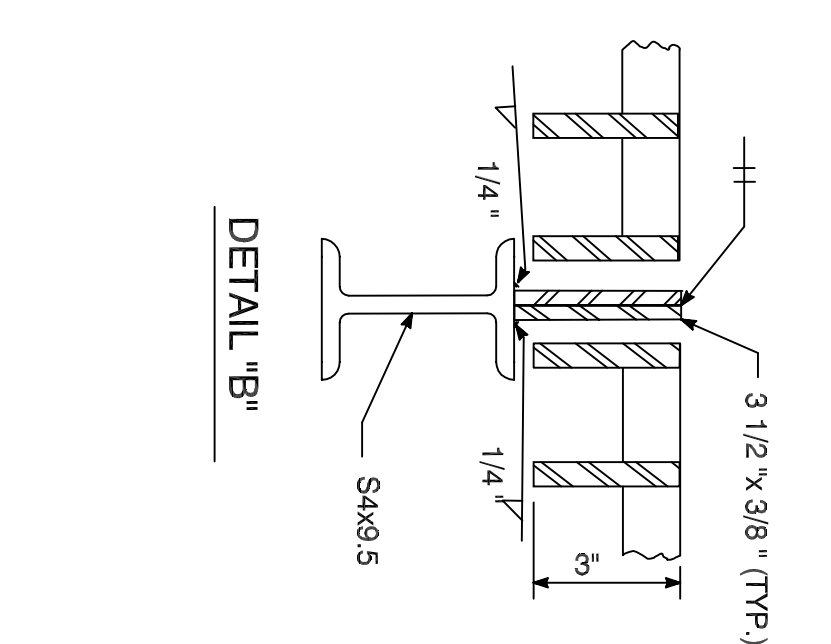


SECTION A-A

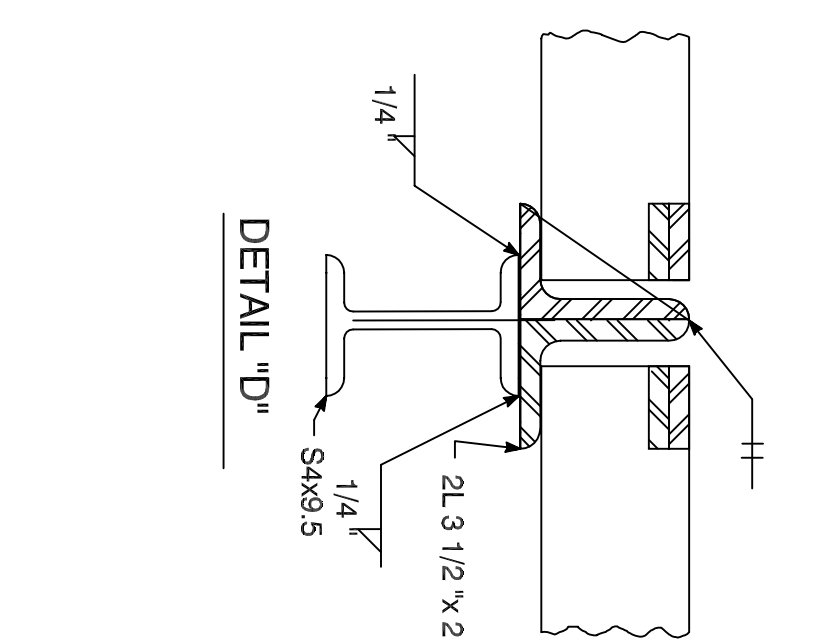
TYPE "CL" CATCH BASIN DOUBLE GRATE - TYPE II



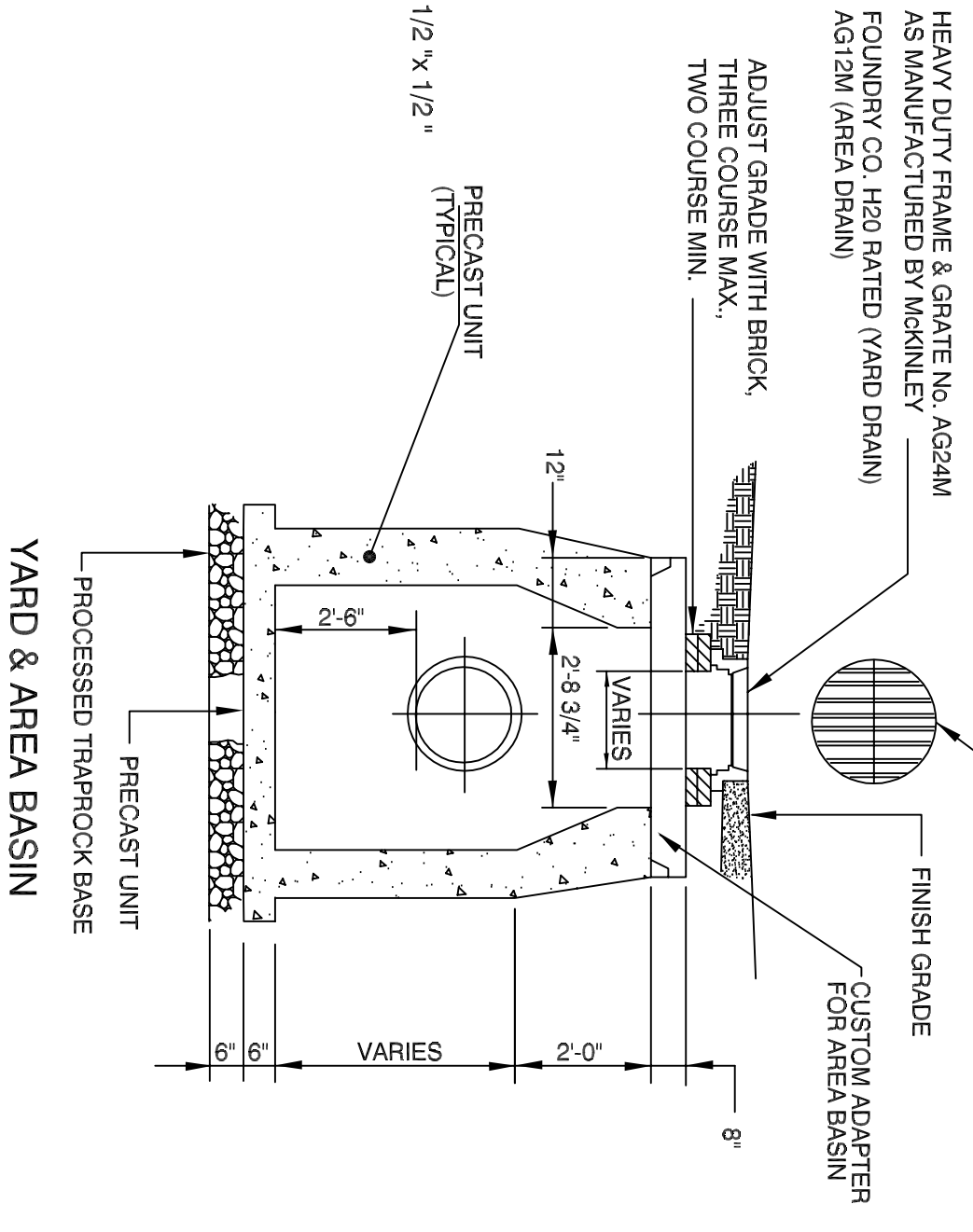
SECTION B-B



DETAIL "B"



DETAIL "D"



YARD & AREA BASIN

Revisions	By	Date

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Standard Drawing No. SR-5

Job No.

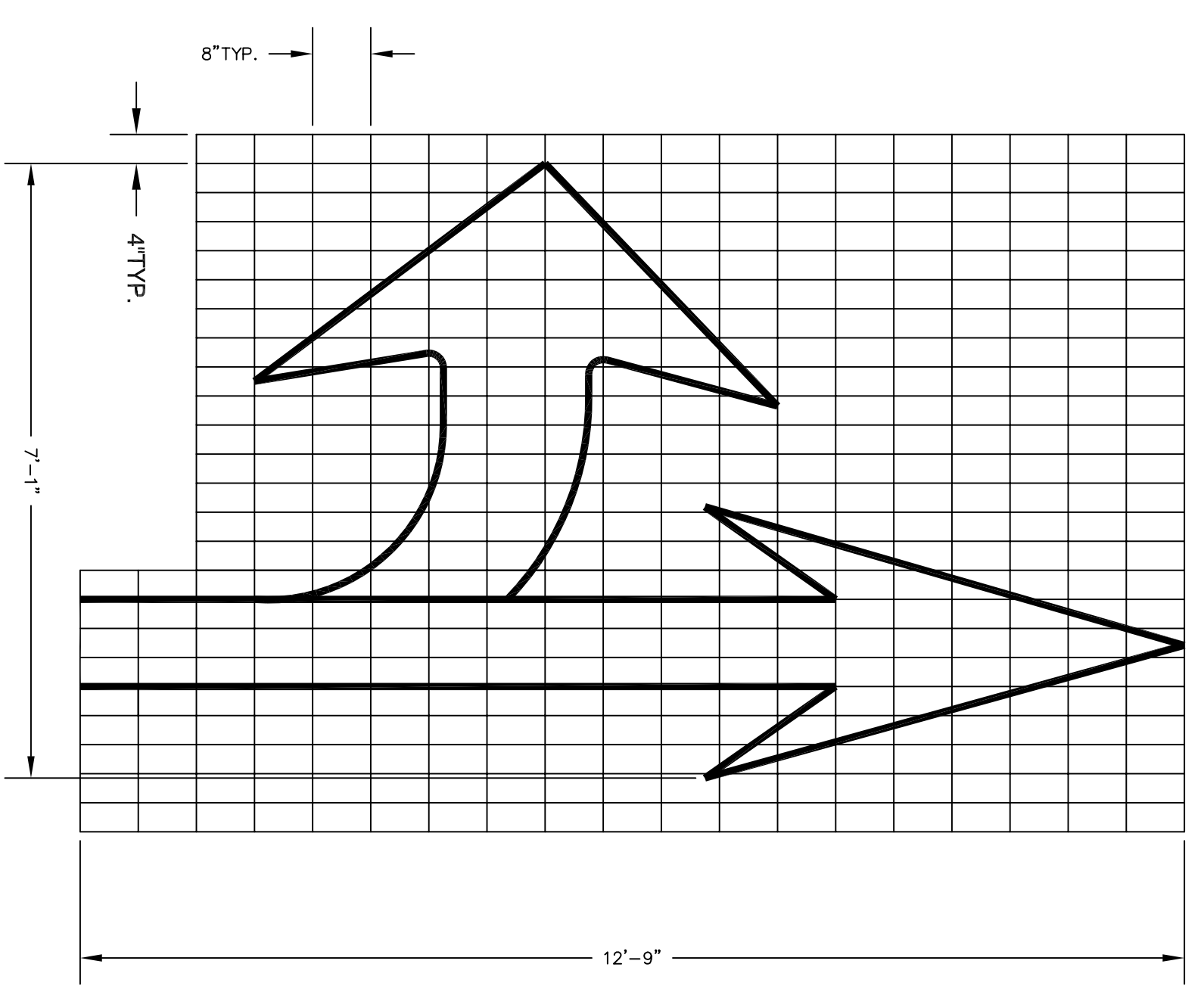
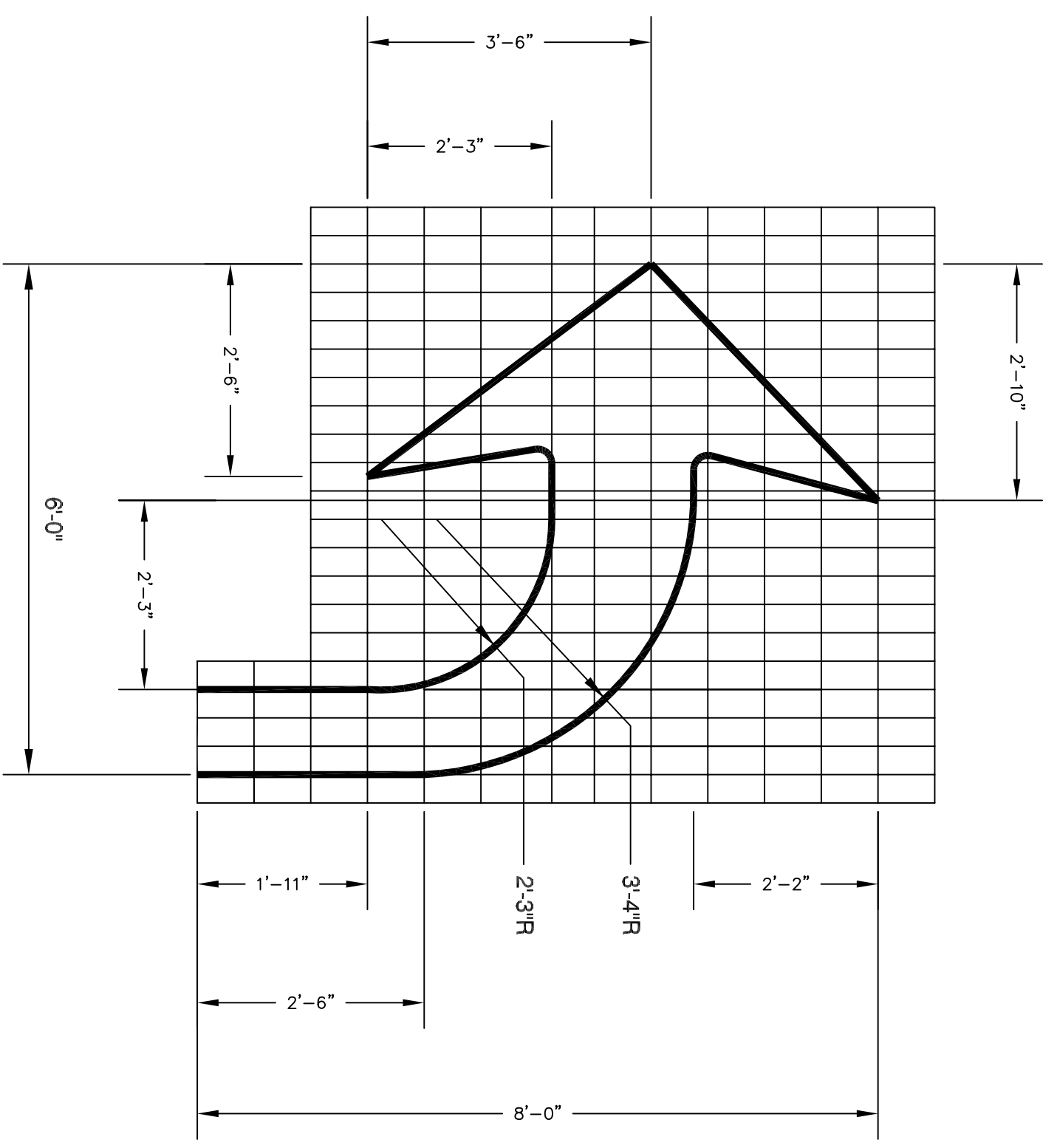
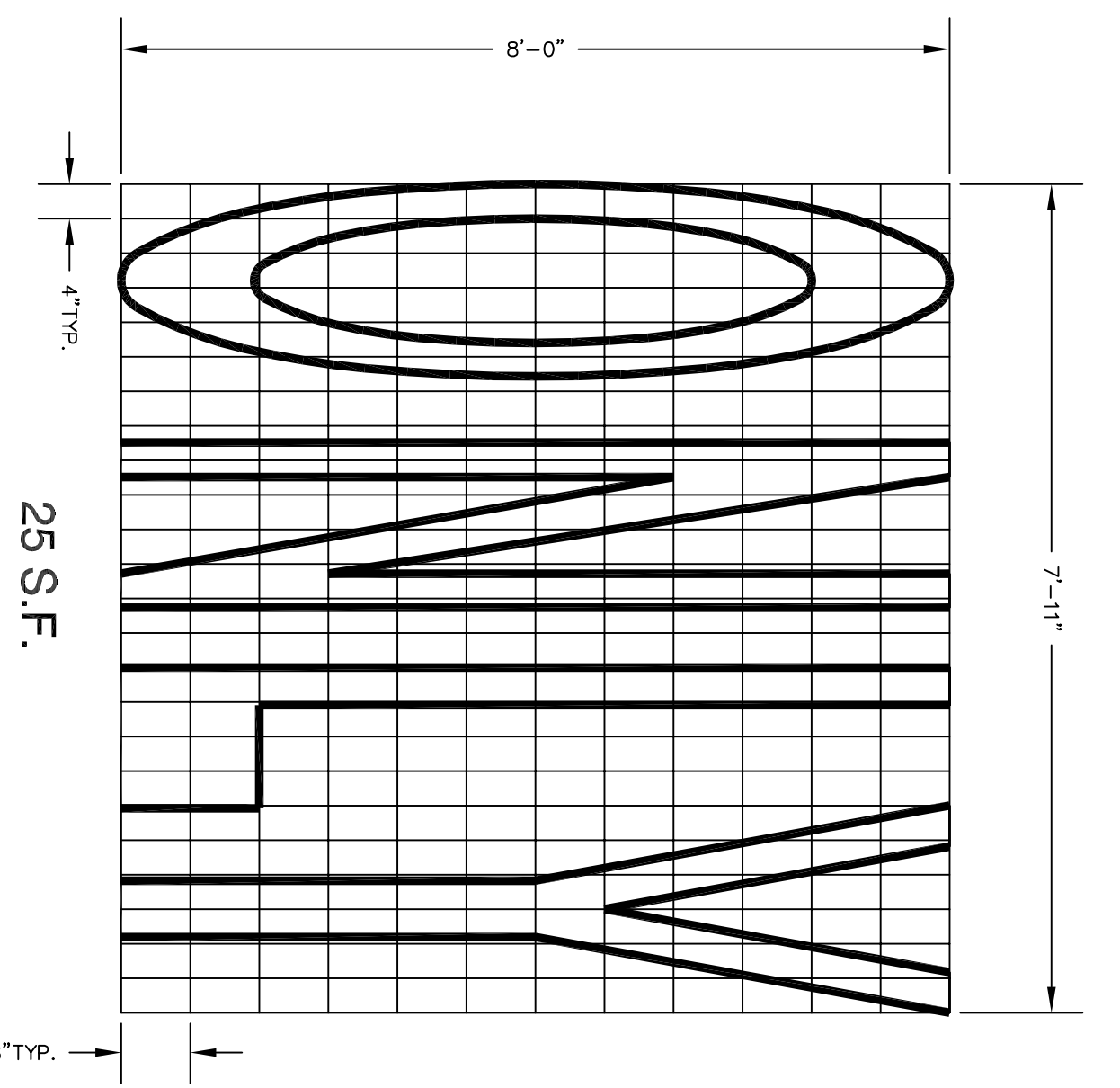
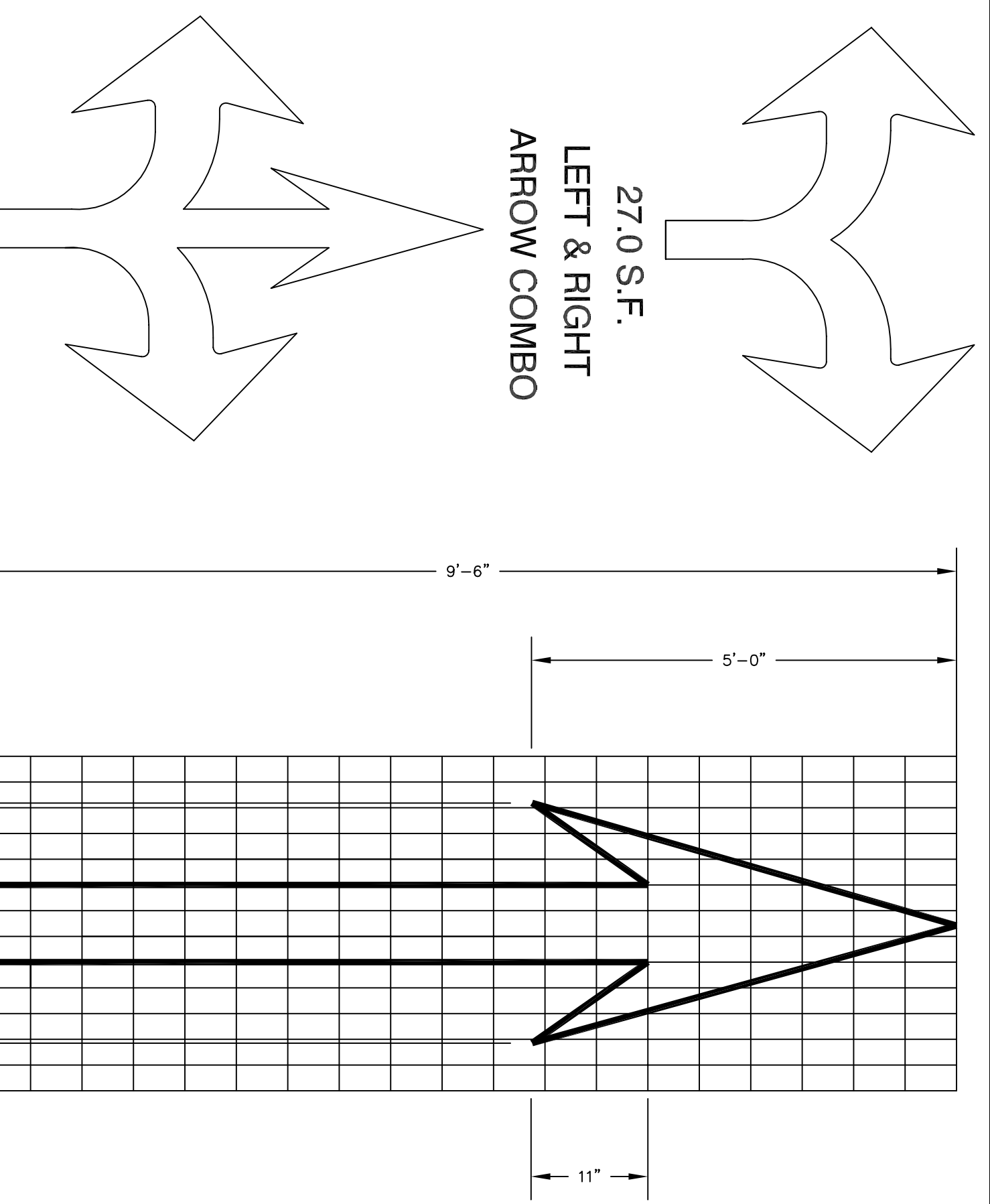
Date January 2005



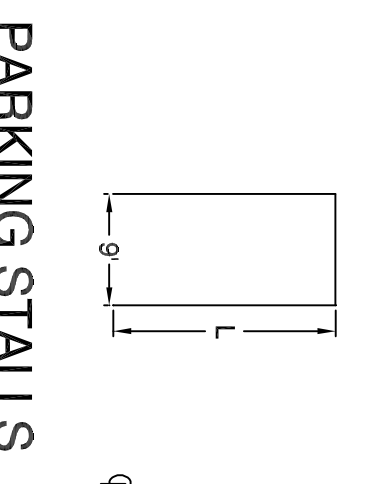
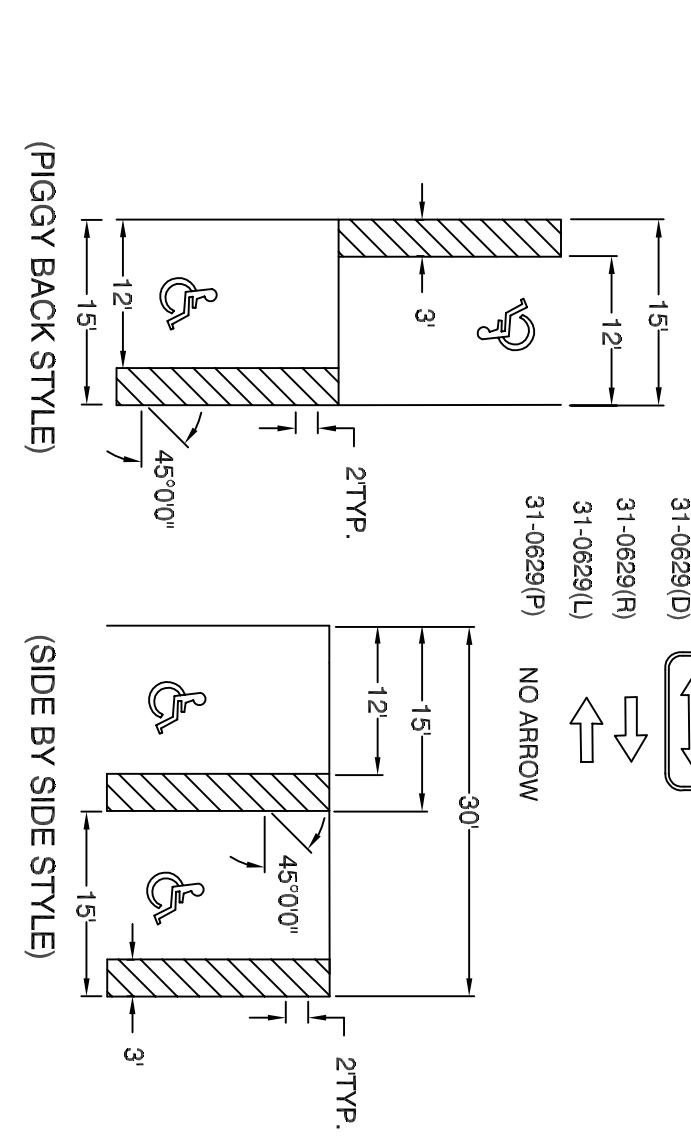
City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Double Grate Catch Basins



Sheet No.  
File Name  
SR-5.DWG



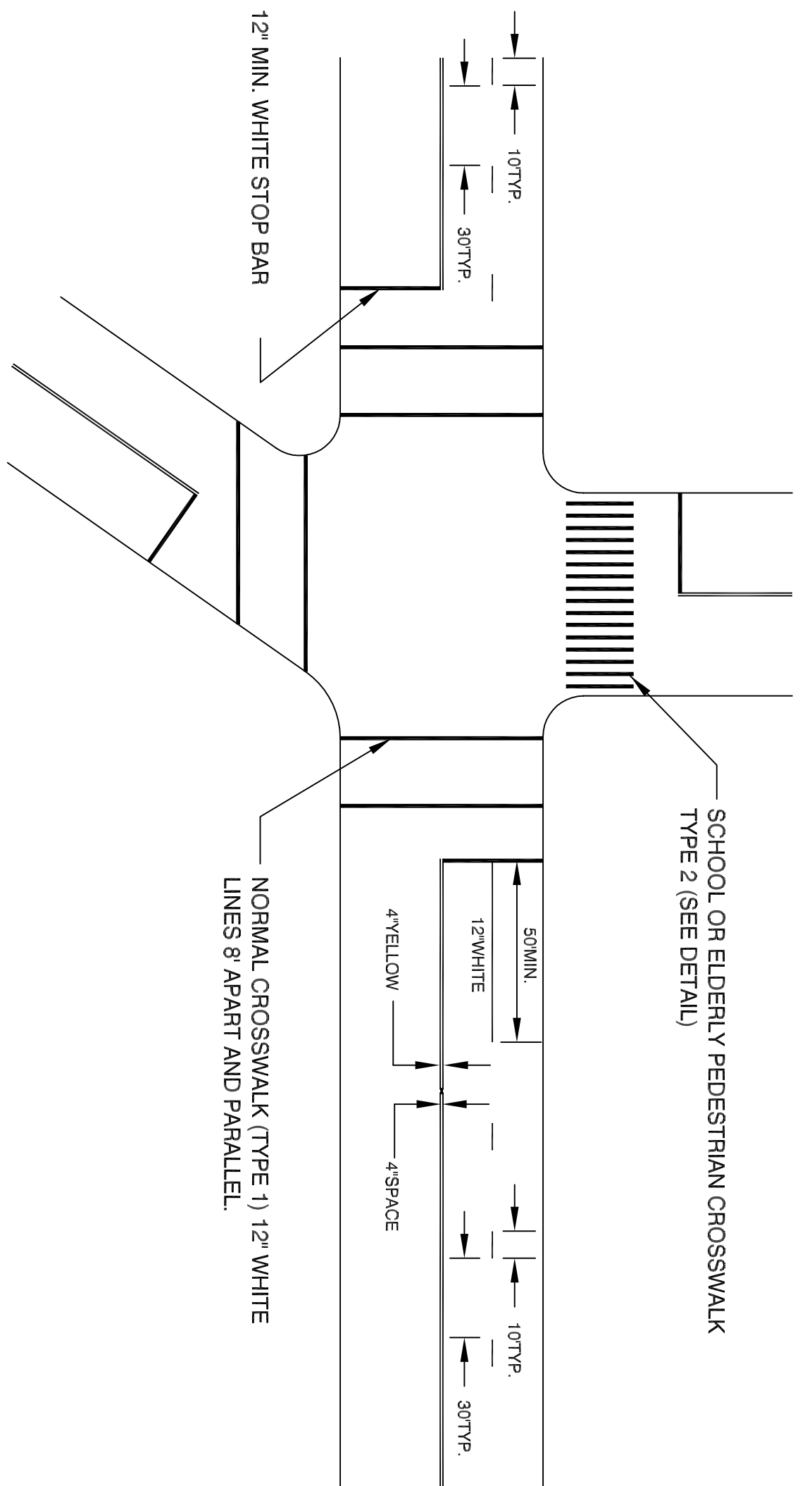
REFER TO ADJACENT VIEWS FOR DIMENSIONING



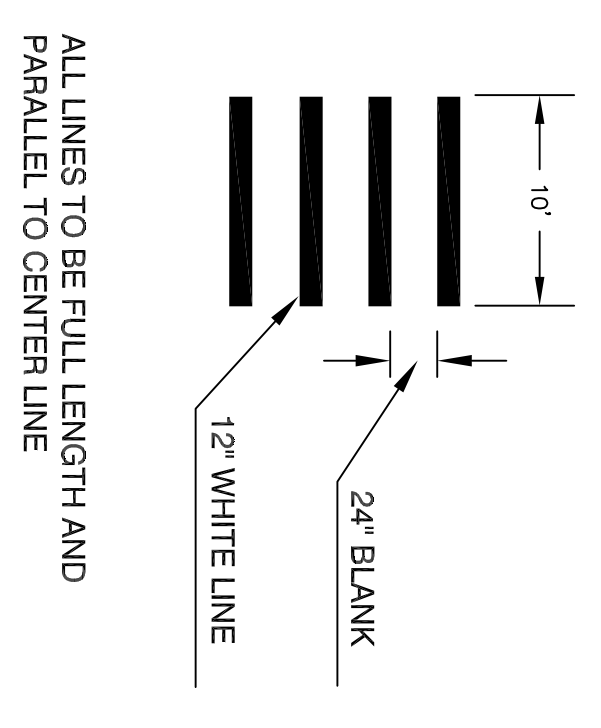
PARKING STALLS FOR HANDICAPPED

PARKING STALLS

SCHOOL OR ELDERLY PEDESTRIAN CROSSWALK TYPE 2 (SEE DETAIL)

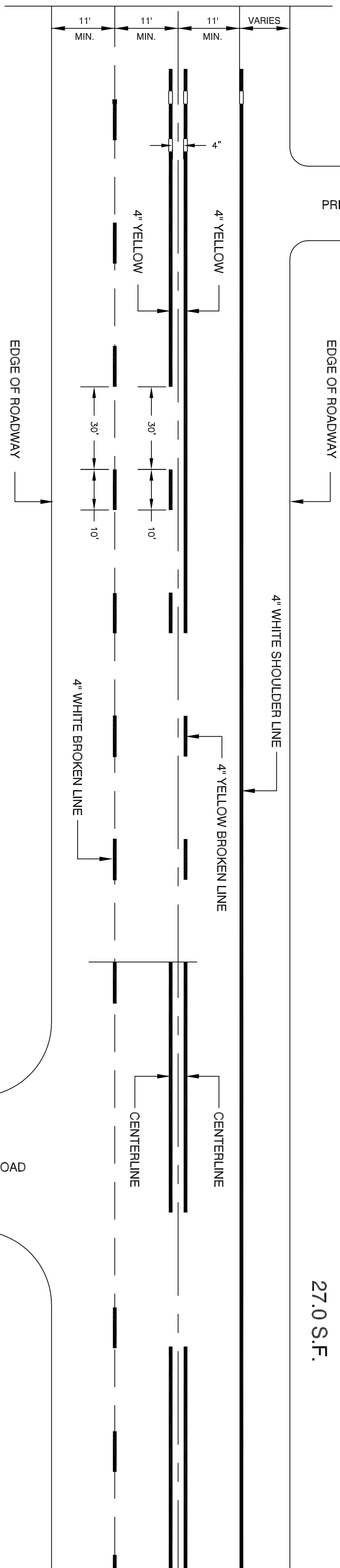


PEDESTRIAN CROSSWALK DETAIL (TYPE 2)



- ① STOP BARS TO BE 12" UNLESS OTHERWISE NOTED ON PLANS.
- ② STOP BARS TO BE PLACED A MINIMUM OF 5' IN ADVANCE OF NEAREST EDGE OF CROSSWALK.
- ③ IN ABSENCE OF MARKED CROSSWALK THE STOP BAR SHALL BE PLACED AT DESIRED STOPPING POINT IN NO CASE MORE THAN 50' OR LESS THAN 5' FROM THE NEAREST EDGE OF THE INTERSECTION ROADWAY AND 90° TO CENTERLINE OF ROADWAY.
- ④ THE STOP BAR SHALL ORDINARILY BE PLACED IN LINE WITH THE NEAREST EDGE OF THE INTERSECTION ROADWAY AND NOT BE LOCATED EXACTLY WHERE VEHICLES ARE EXPECTED TO STOP. THE STOP BAR SHOULD BE PLACED AT THE STOPPING POINT.
- ⑤ STOP BARS (AND CENTERLINE, WHEN SIDE STREET WIDTHS ARE 16' OR MORE) TO BE PAINTED ON SIDE STREETS WITHIN LIMITS OF CONSTRUCTION, UNLESS OTHERWISE INDICATED, OR AS DIRECTED BY THE ENGINEER.
- ⑥ ALL STOP BAR AND CROSSWALK MARKINGS SHALL BE INSTALLED SO THAT THE EDGE OF THE PAVEMENT MARKING DOES NOT BUTT THE CURB. THE MARKINGS SHALL END TWELVE (12) INCHES FROM THE FACE OF CURB AND THE CUT LINE SHALL BE PARALLEL WITH THE CURB.
- ⑦ PAVEMENT MARKINGS SHALL BE PERFORMED PLASTIC UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PAVEMENT MARKINGS CENTERLINE, LANE DIVIDERS AND SHOULDER LINE



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Job No.  
Date January 2005



City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Typical Pavement Markings



Sheet No.  
File Name  
SR-6-DWG

TRAFFIC PHASING PLAN

NOTES:

(REFER TO ADJACENT TRAFFIC PHASING PLAN)

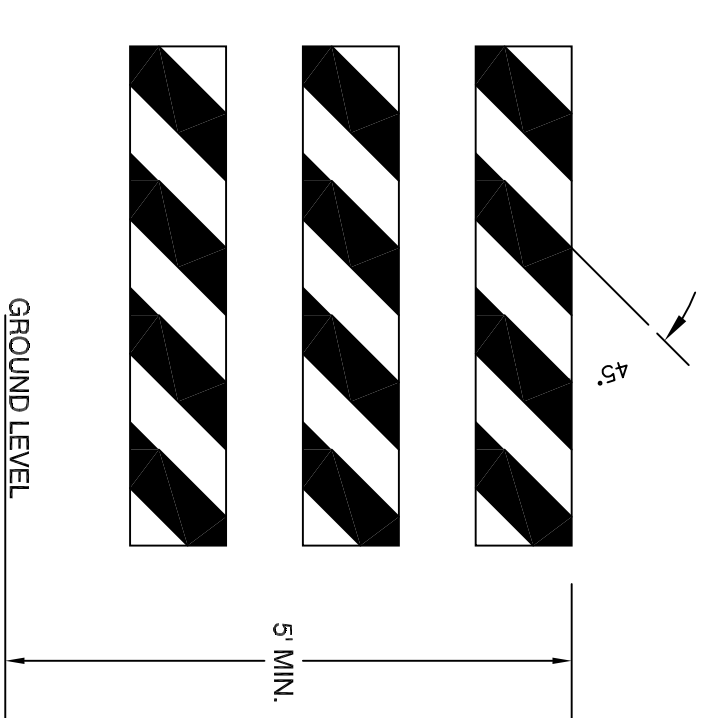
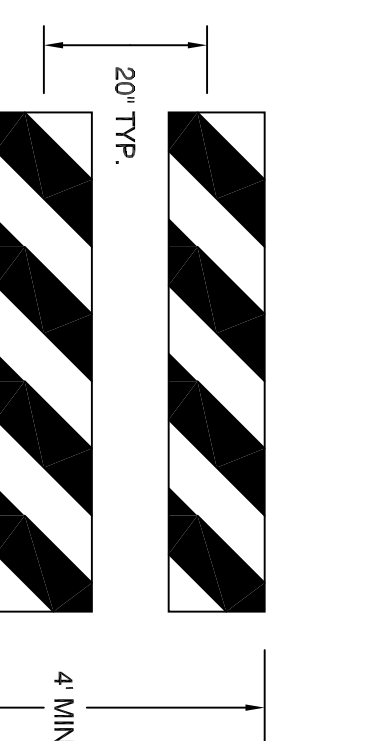
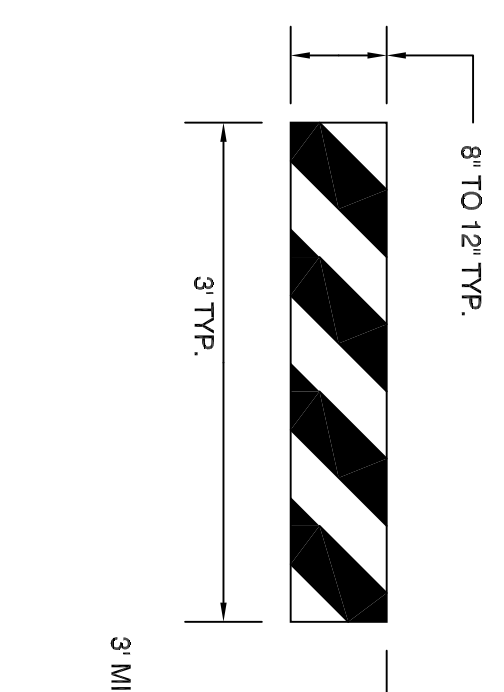
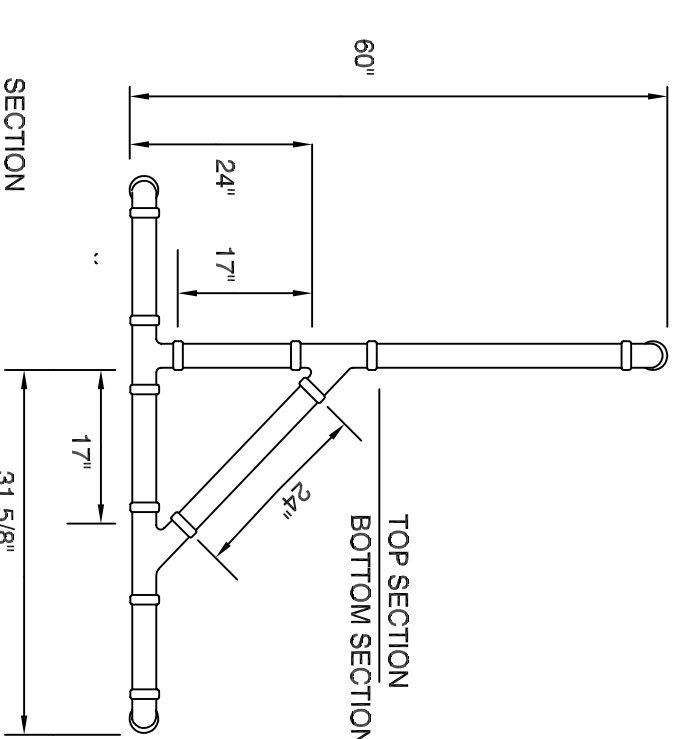
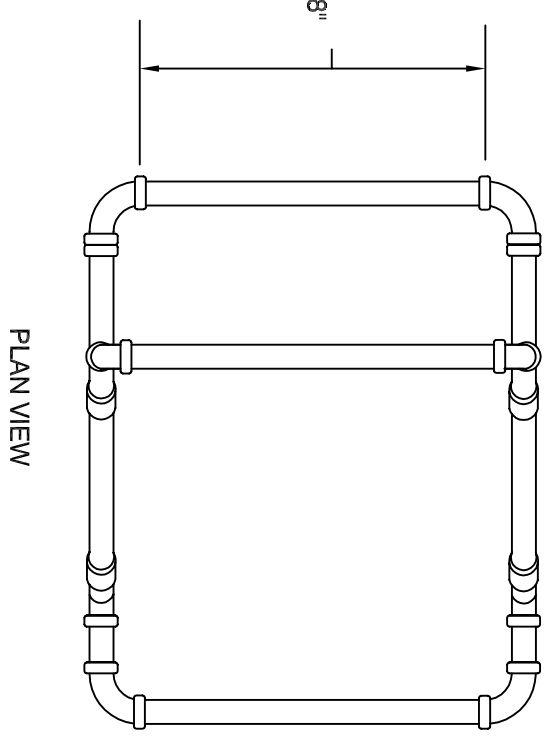
- WORK INCLUDED IN THIS PROJECT SHALL BE COMPLETED IN PHASES AS INDICATED ON THE TRAFFIC PHASING PLAN. THE WORK SITE SHALL BE POSTED AS REQUIRED WITH TEMPORARY NO PARKING / TOW ZONE SIGNS DURING COMPLETION OF STEPS 2 & 8 OF THE SEQUENCE OF WORK. TRAFFIC SHALL BE MAINTAINED IN BOTH DIRECTIONS. THE CONTRACTOR SHALL CONFINE HIS EQUIPMENT TO THE PARKING LANE ADJACENT TO THE WORK AREA DURING THESE STEPS. NO MATERIAL IS TO BE STORED OVERNIGHT WITHIN THE STREET RIGHT OF WAY OR ON ADJACENT PRIVATE PROPERTY.
- DURING STEPS 7-9 OF THE SEQUENCE OF WORK, THE STREET SHALL BE CLOSED TO ALL THRU TRAFFIC UNLESS DIRECTED OTHERWISE BY THE DIRECTOR OF TRANSPORTATION. BOTH SIDES OF THE STREET SHALL BE POSTED WITH TEMPORARY NO PARKING / TOW ZONE SIGNS. ACCESS FOR EMERGENCY VEHICLES SHALL BE PROVIDED AT ALL TIMES. ACCESS STEPS 7-9 WHEN TEMPORARY INTERUPTIONS ARE UNAVOIDABLE.
- PRIVATE DUTY POLICE OFFICER(S) FROM THE CITY OF HARTFORD SHALL BE ON DUTY DURING PLACEMENT OF BITUMINOUS CONCRETE (STEP 9) AS DIRECTED BY THE ENGINEER. ALL INTERSECTING STREETS SHALL BE POSTED WITH ROAD CLOSED AHEAD SIGNS AT THE NEAREST CROSS STREET PARALLEL TO THE STREET WHERE BITUMINOUS CONCRETE IS BEING PLACED.
- CONSTRUCTION SIGNS SHALL CONFORM TO THE SPECIFICATIONS OF THE CONNECTICUT DEPARTMENT OF TRANSPORTATION CATALOG OF SIGNS. A COPY OF THE CATALOG OF SIGNS IS AVAILABLE FOR REVIEW AT THE OFFICE OF THE CITY OF HARTFORD DIRECTOR OF TRANSPORTATION. ALL OTHER TRAFFIC CONTROL DEVICES FOR MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART V. TRAFFIC CONTROL FOR STREETS AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS.
- THE CONTRACTOR SHALL OBTAIN TEMPORARY NO PARKING / TOW ZONE SIGNS FROM THE CITY OF HARTFORD SIGN SHOP AND RETURN THEM AT THE CONCLUSION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOSS OR DAMAGE OF THESE SIGNS. AT THE RATE OF \$33.00 PER SIGN.

LEGEND

- = STREET LEGALLY CLOSED
- = DETOUR LEFT
- = DETOUR RIGHT
- = ROAD CLOSED AHEAD
- = LOCAL TRAFFIC ONLY AHEAD
- = ROAD CLOSED
- = MERGE RIGHT
- = MERGE LEFT
- = MERGE
- = LEFT LANE CLOSED AHEAD
- = RIGHT LANE CLOSED AHEAD
- = ROAD WORK AHEAD

NOTES:

- ALUMINUM BARRICADE FACE PANELS SHALL BE MOUNTED ON 3" OR 4" P.V.C. BARRICADE SUPPORT.
- MARKINGS FOR BARRICADE FACE PANELS SHALL ALTERNATE ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES AT 45° ANGLE SHALL BE USED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE REFLECTIVE SHEETING-ENCAPSULATED LENS. BARRICADE FACE PANELS AS NOTED SHALL BE REFLECTIVE ON BOTH SIDES. WHERE TRAFFIC PASSES ONLY IN ONE DIRECTION OF TRAVEL, ONLY THE SIDE FACING TRAFFIC SHALL BE REFLECTORIZED.
- ALUMINUM BARRICADE FACE PANELS SHALL HAVE ROUNDED CORNERS.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE FACE PANEL WHICH HE DEEMS HAZARDOUS AND NOT IN THE BEST INTEREST OF THE MOTORING PUBLIC, OR NOT SUITABLE FOR THE PURPOSE INTENDED.



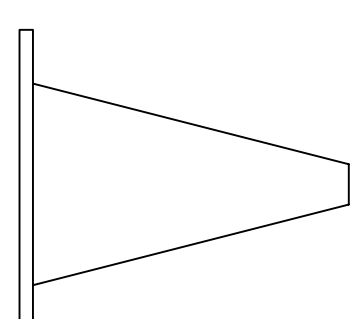
TYPICAL 3" OR 4" BARRICADE SUPPORT

CONSTRUCTION BARRICADES

ALUMINUM BARRICADE FACE PANELS

SEQUENCE OF WORK

- NORTH OR WEST SIDE OF ROADWAY
- INSTALL WARNING AND CONSTRUCTION SIGNS AS INDICATED ON THE PHASING PLAN.
- INSTALL DRAINAGE / UNDERDRAIN, COMMENCE FROM OUTLET ENDS OF PROPOSED UNDERDRAIN AND WORK UPWARDS HIGH END OF DRAINAGE / UNDERDRAIN.
- CONSTRUCT DRIVEWAY APRONS AND ADJOINING WALK.
- REMOVE / REPLACE GRANITE CURBING.
- REPLACE / CONSTRUCT SIDEWALKS / HANDICAPPED RAMPS, BACKFILL ADJACENT TO CURB AND WALK.
- SOUTH OR EAST SIDE OF ROADWAY
- REPEAT STEPS 2, THROUGH 5.
- ROADWAY AND FINAL RESTORATION
- EXCAVATION / COLD MILLING OF ROADWAY AS INDICATED. ADJUST UTILITY STRUCTURES TO GRADE.
- INSTALL PROCESSED STONE BASE / REPAIR CONCRETE ROAD BASE AS REQUIRED.
- PLACE BITUMINOUS CONCRETE AND INSTALL BITUMINOUS CONCRETE CURB IF REQUIRED.
- SEED / SOE ALL DISTURBED AREAS.

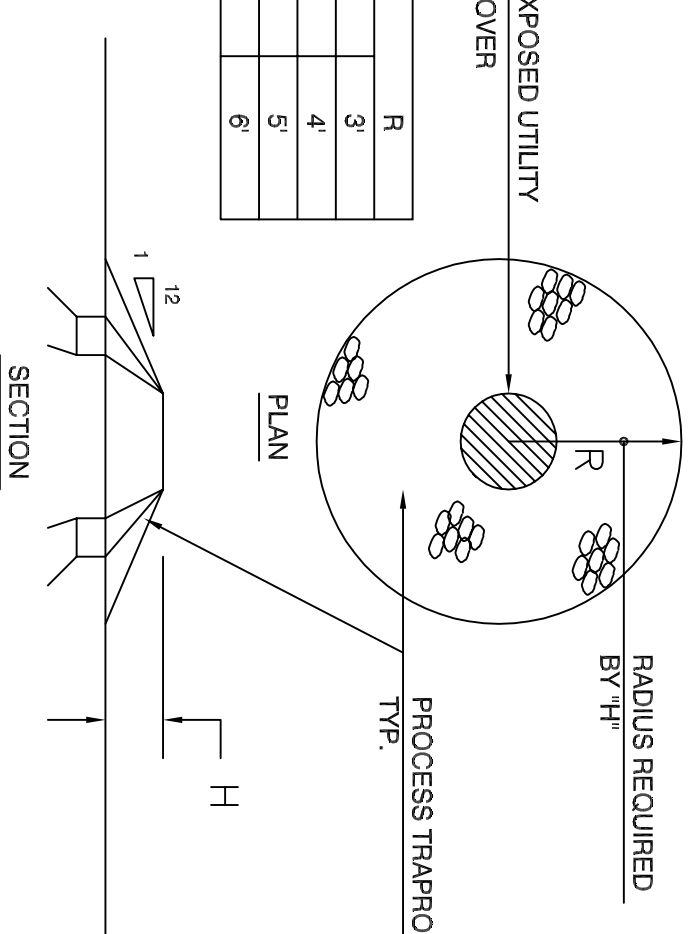


NOTES:

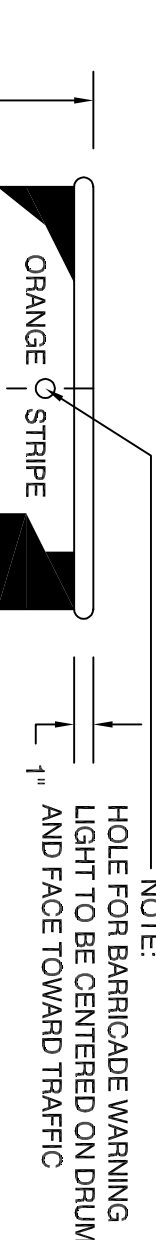
- TRAFFIC CONES SHALL BE DESIGNED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CHAPTER VI, SECTION 6C-3 CONE DESIGN.
- CONES SHALL BE A MINIMUM OF 18" IN HEIGHT OR AS SPECIFIED. COLOR SHALL BE PREDOMINATELY FEDERAL ORANGE.
- PLASTIC CONES ARE TO BE COLOR IMPREGNATED.
- RUBBER CONES ARE TO BE REFLECTORIZED WITH INTERIOR RIBS FOR RIGIDITY.
- RUBBER CONES ARE TO BE REFLECTORIZED WITH INTERIOR RIBS FOR RIGIDITY.
- CONE WALL THICKNESS MUST WITHSTAND IMPACT, WITHOUT DAMAGE TO EITHER CONE OR VEHICLE UPON IMPACT.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE HE DEEMS NOT SUITABLE FOR THE PURPOSE INTENDED.

TRAFFIC CONE

H	R
3"	3
4"	4
5"	5
6"	6



UTILITY RAMPING DETAIL



- TRAFFIC DRUMS SHALL BE CONSTRUCTED OF PLASTIC OR RUBBER.
- TRAFFIC DRUMS SHALL BE DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM HE DEEMS NOT SUITABLE FOR THE PURPOSE INTENDED.
- THE WHITE STRIPES SHALL BE REFLECTIVE SHEETING-ENCAPSULATED LENS.
- REFLECTORIZED STRIPES SHOULD NOT BE PLACED OVER THE PROTRUDING CIRCUMFERENTIAL RIBS OF THE DRUM.
- THOSE SECTIONS OF DRUM NOT COVERED WITH REFLECTORIZED STRIPES SHALL BE ORANGE IN COLOR.

TRAFFIC DRUM

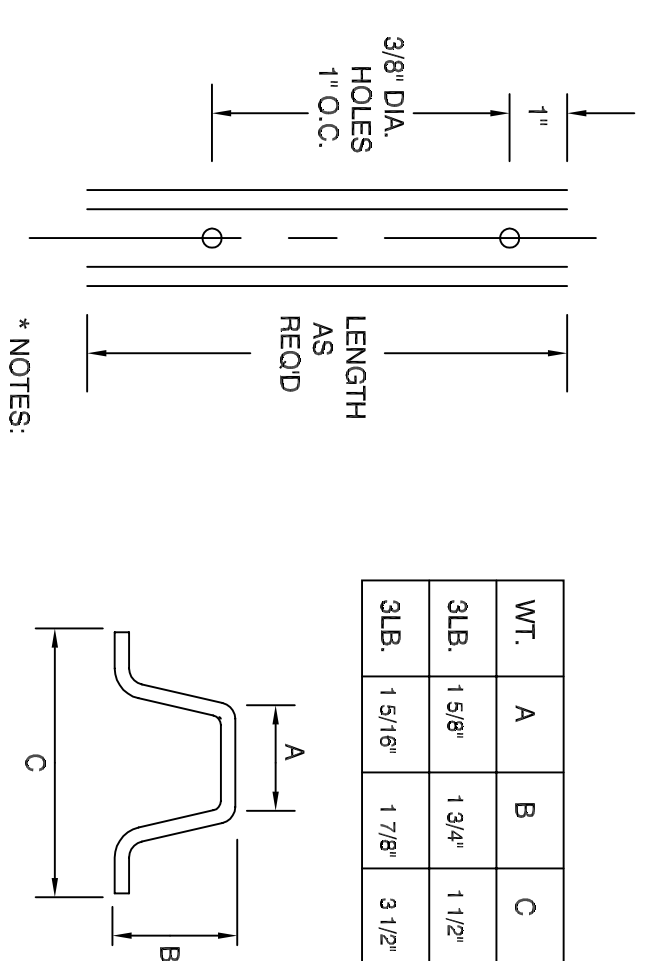
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	36 X 36	1

Symbol	SIZE (IN.)	SUPPORTS *
	30 X 36	2

Symbol	SIZE (IN.)	SUPPORTS *
	48 X 18	2
	48 X 18	2

Symbol	SIZE (IN.)	SUPPORTS *
	30 X 18	

CONSTRUCTION SIGNS



- NOTES:
- STEEL FOR POST SHALL CONFORM TO MECHANICAL REQUIREMENTS OF ASTM A498-B1 GRADE 60 AND TO CHEMICAL REQUIREMENTS OF ASTM A178 CARBON STEEL, THE RAIL HAVING NORMAL WEIGHT OF 91 LB. OR GREATER PER LINEAL YARD.

TYPICAL SIGN - POST DETAILS

Revisions	By	Date

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Standard Drawing No. SR-7

Job No.

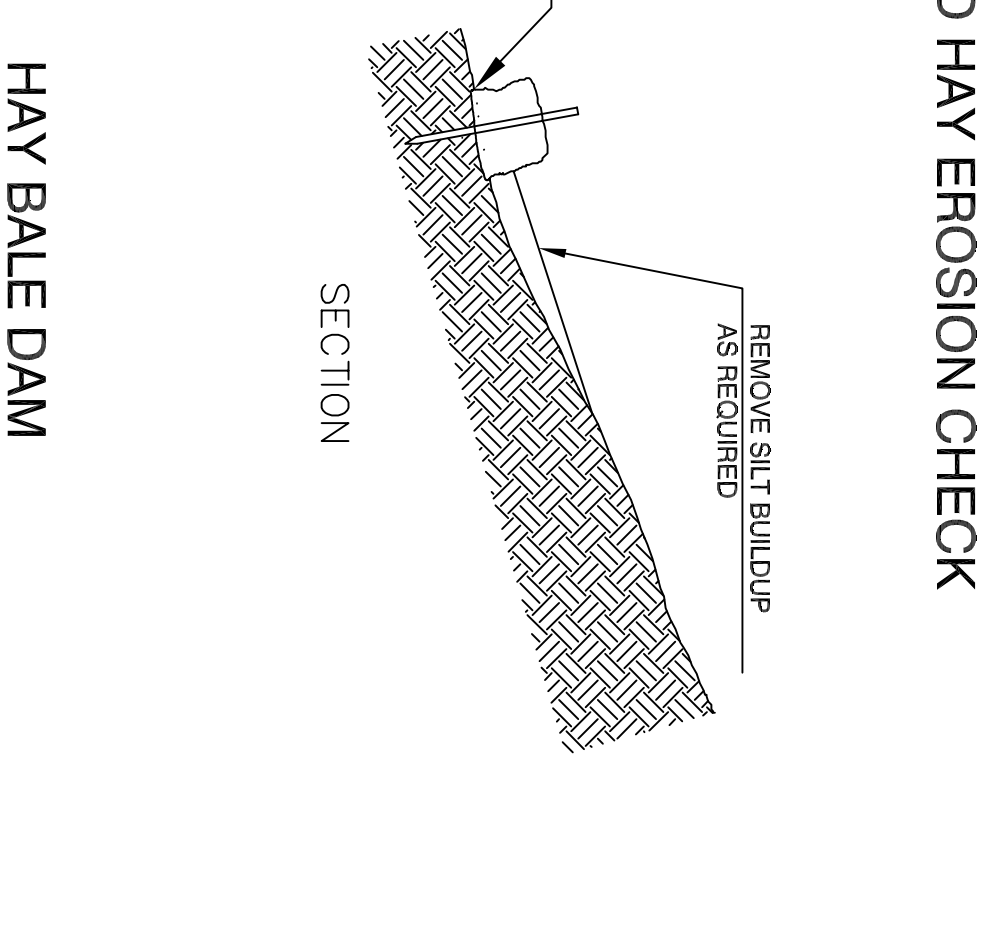
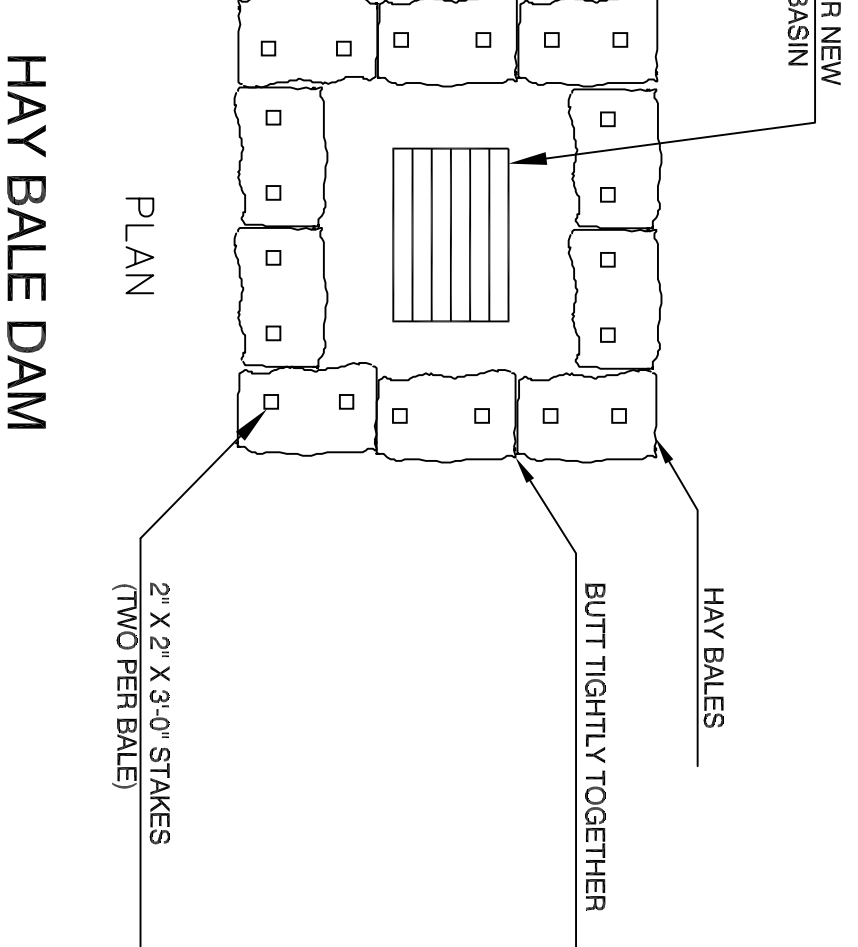
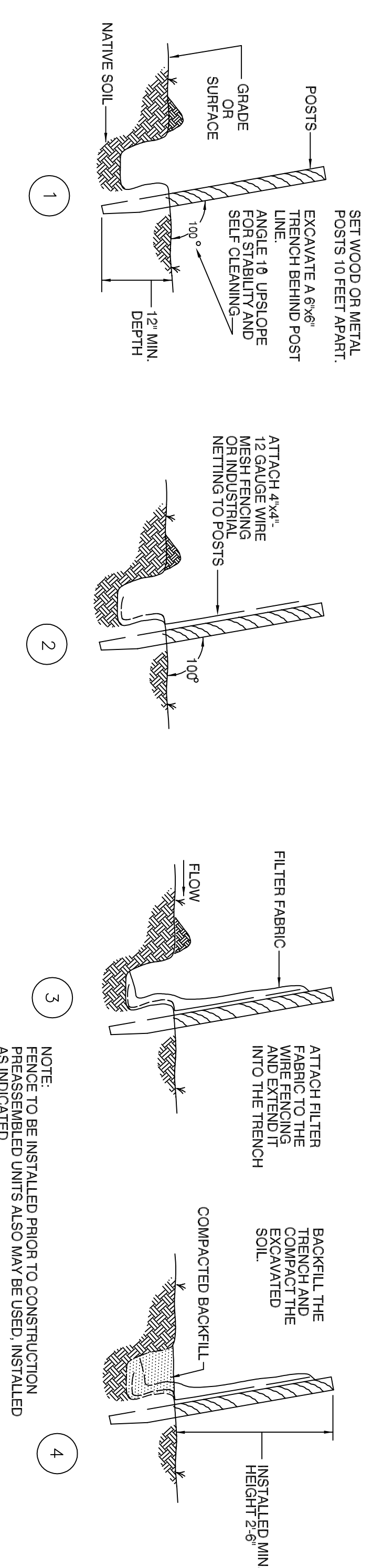
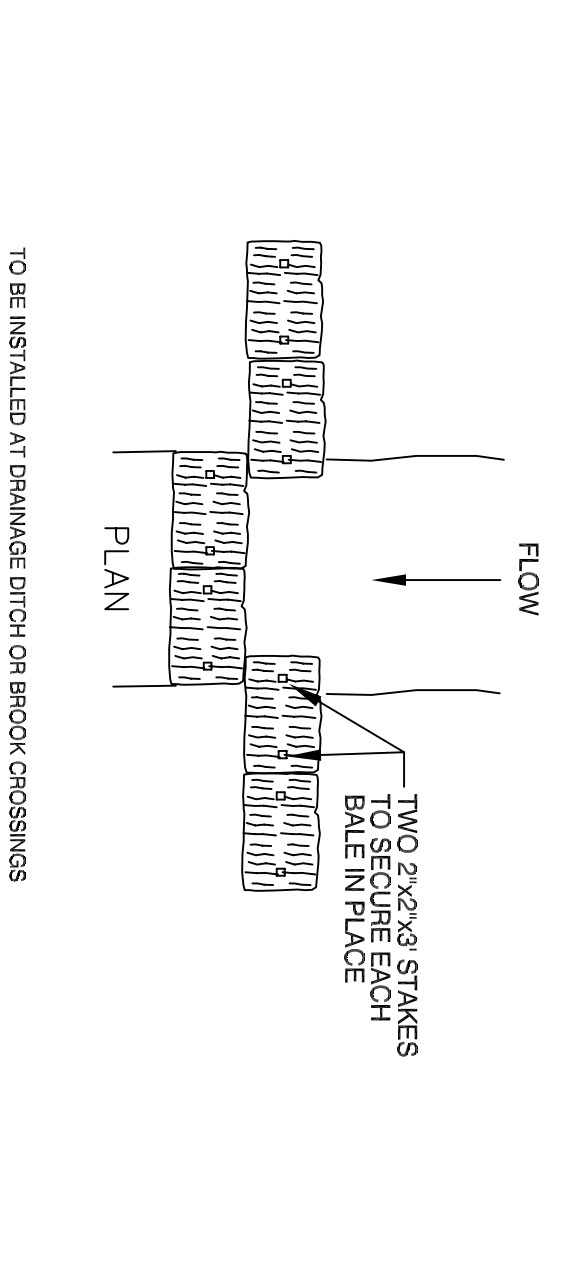
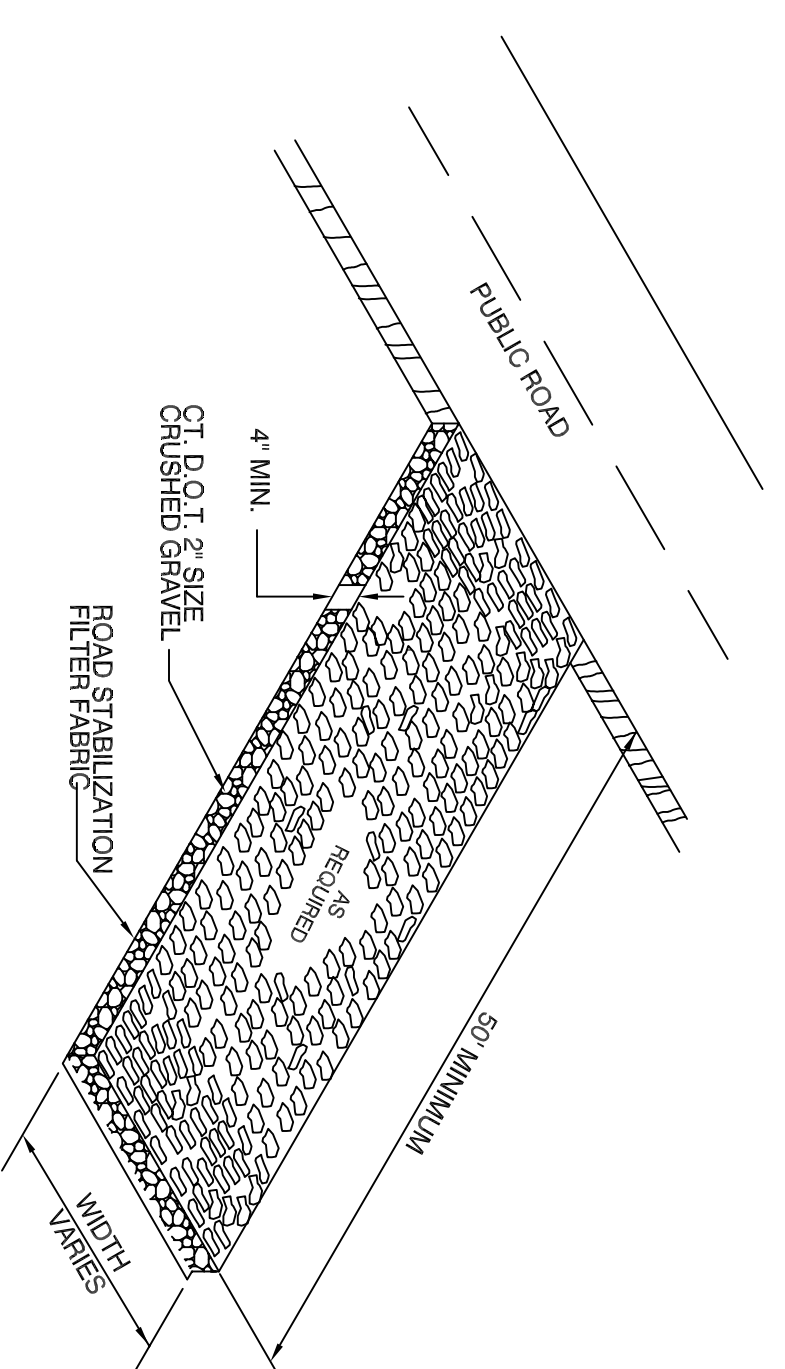
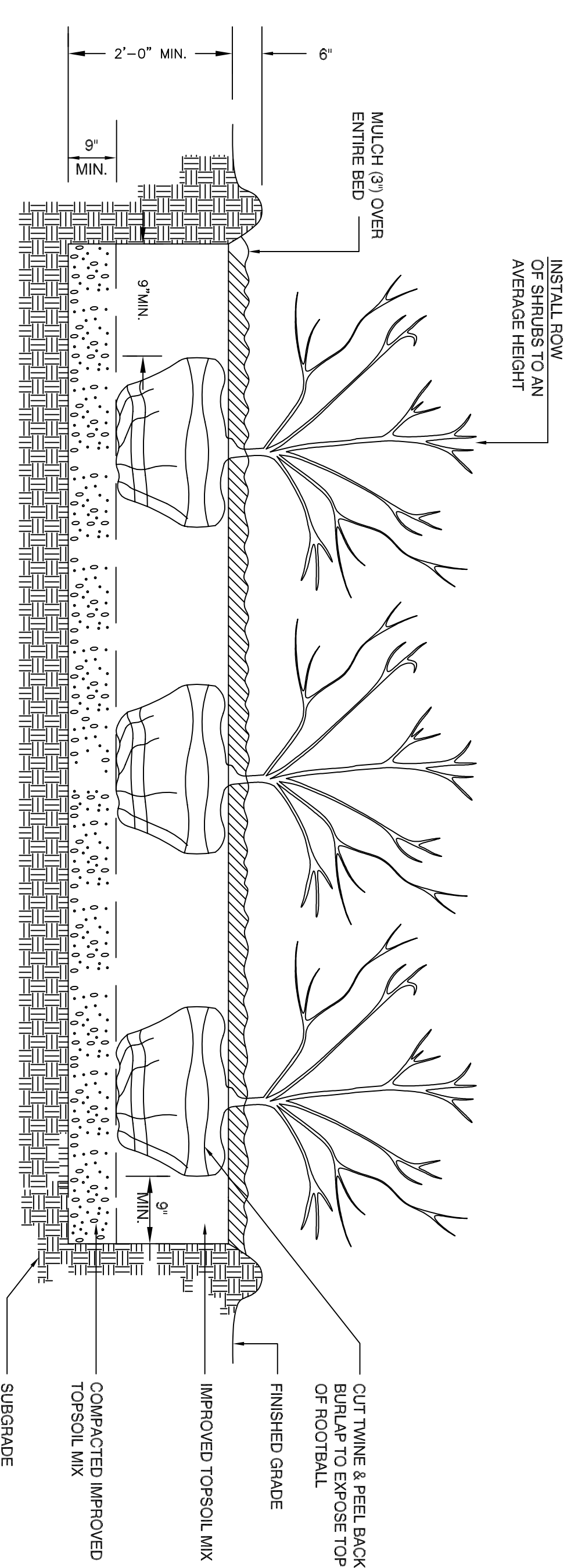
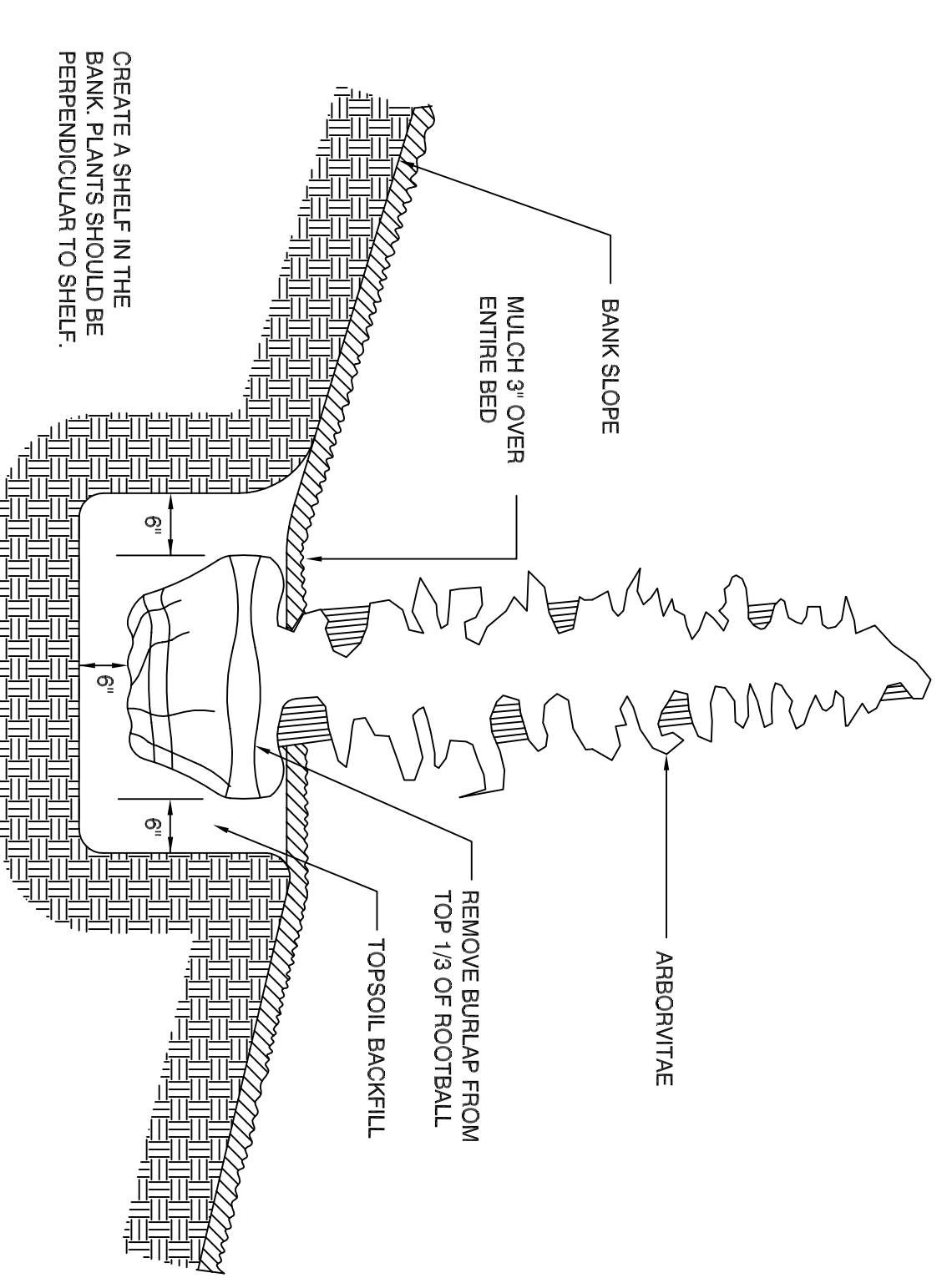
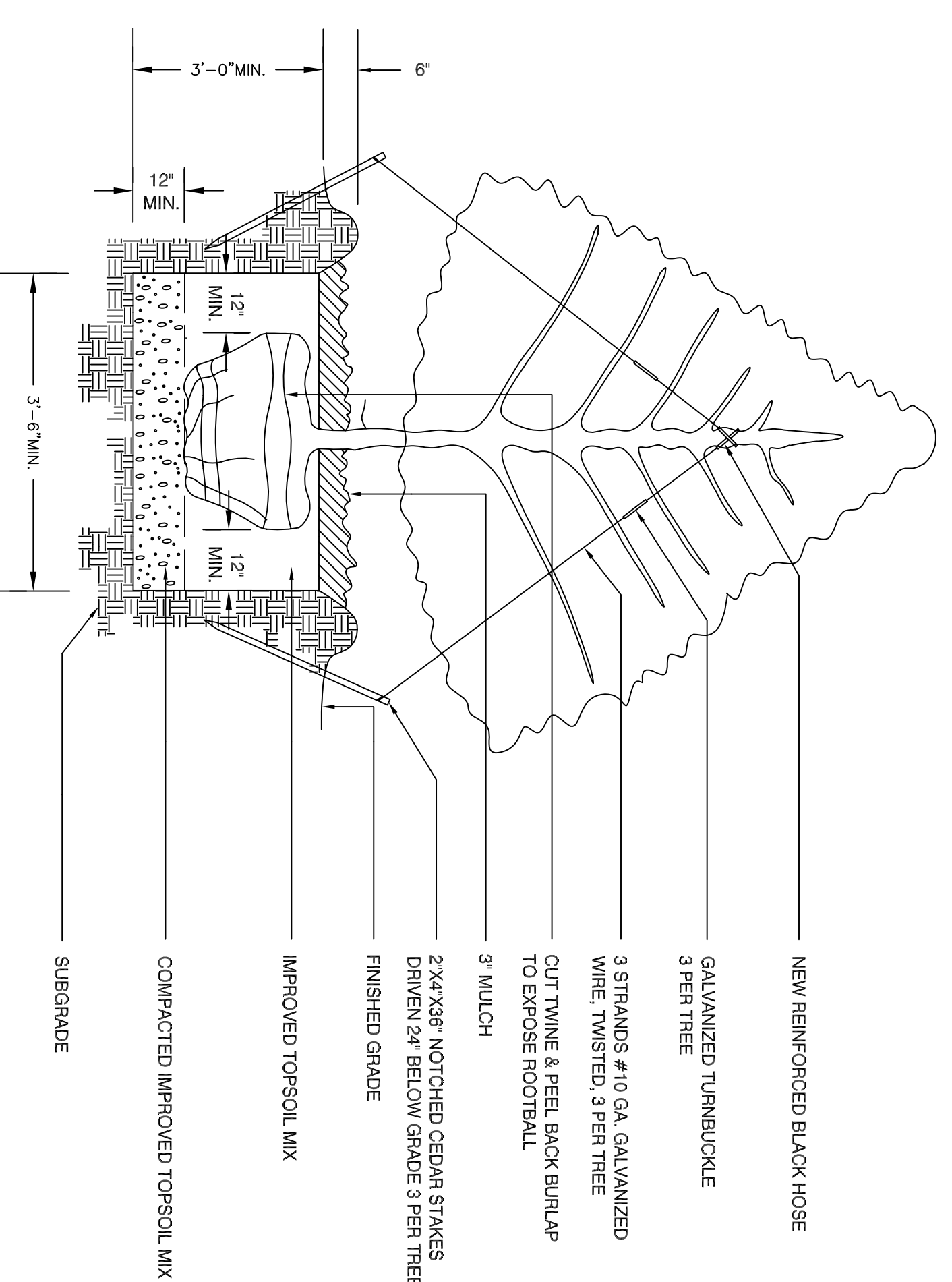
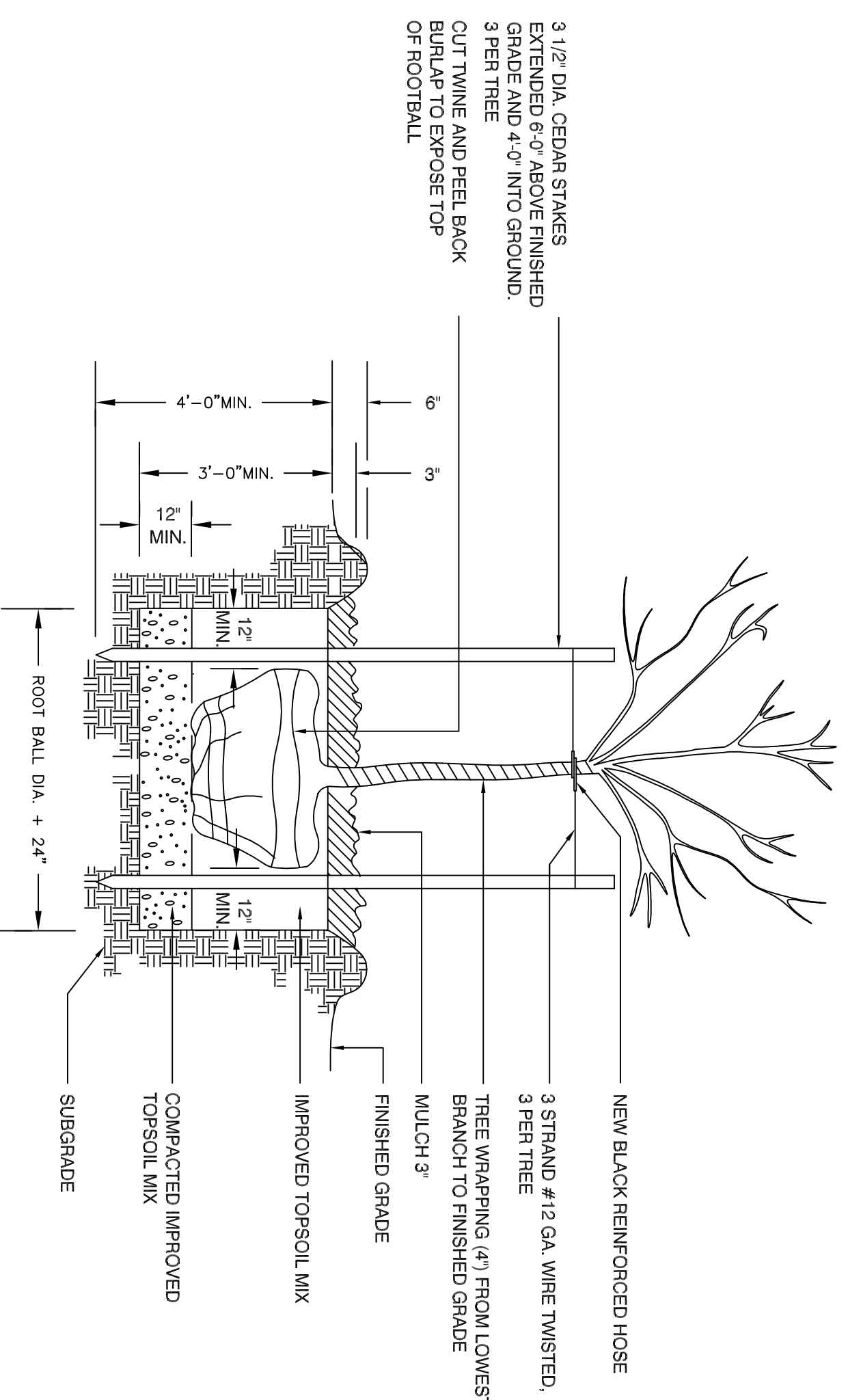
Date January 2005



City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Maintenance and Protection of Traffic



Sheet No.  
File Name  
SR-7.DWG



Revisions	By	Date

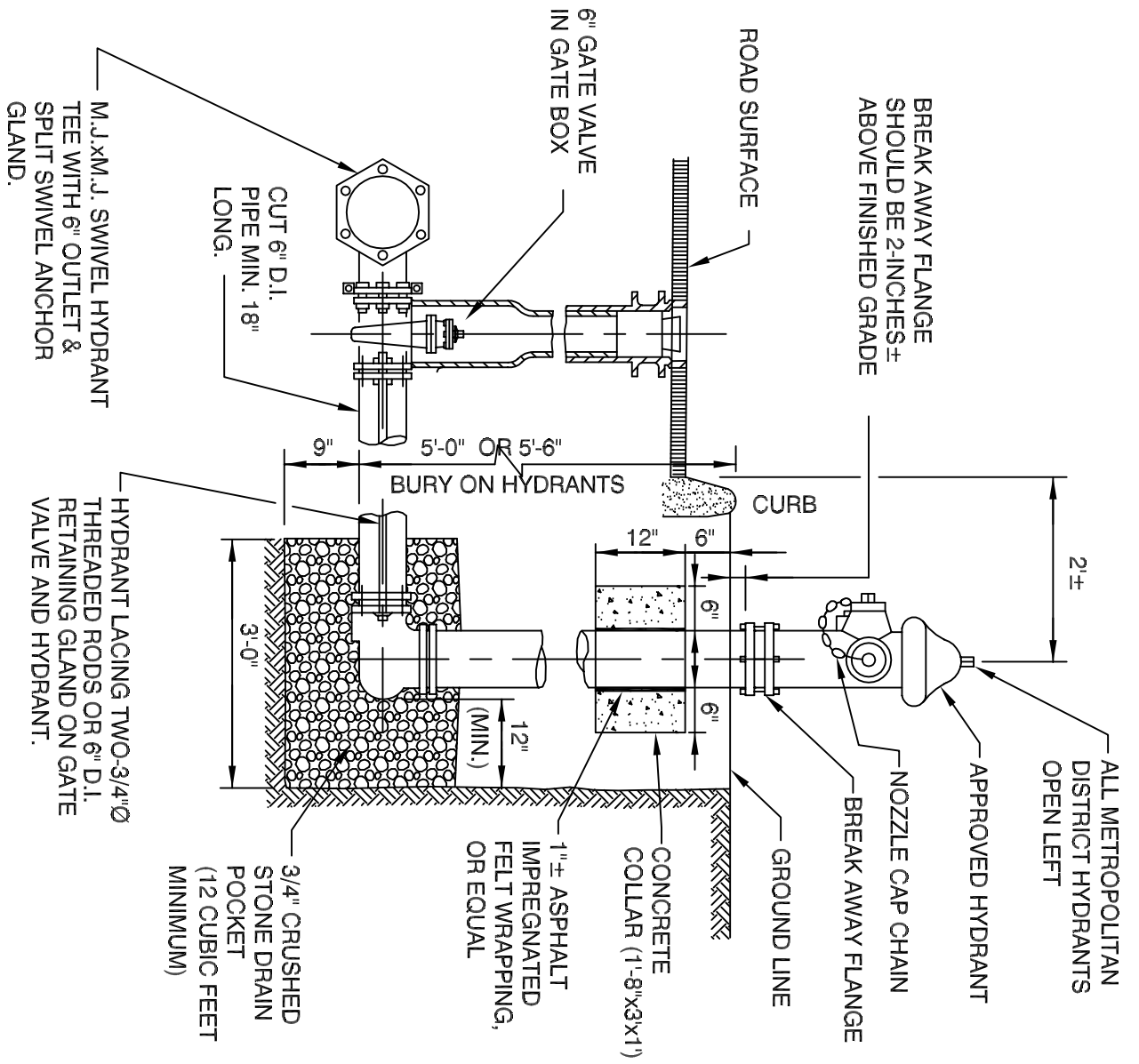
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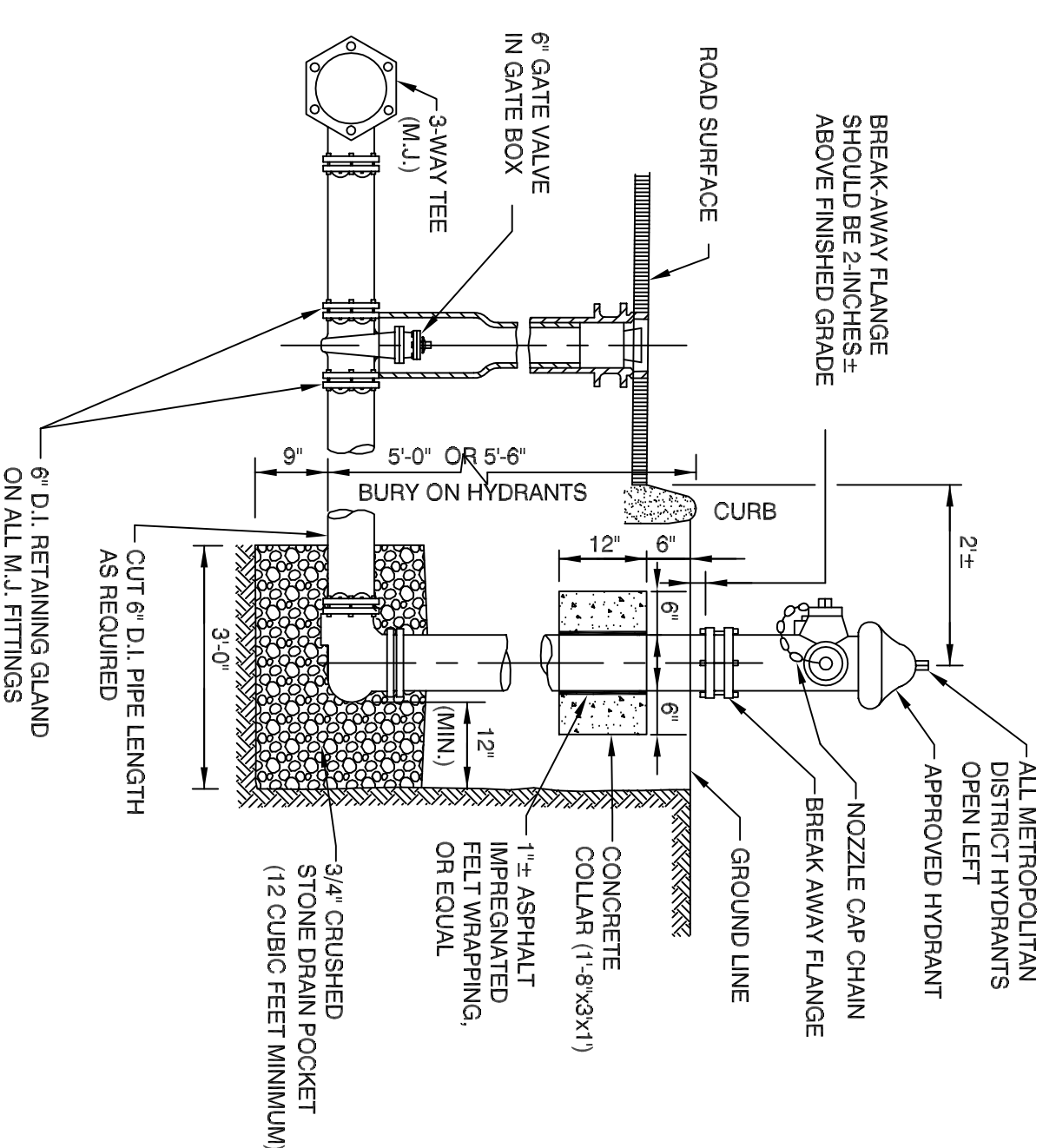
Standard Drawing No. SR-8      Job No.      Date January 2005



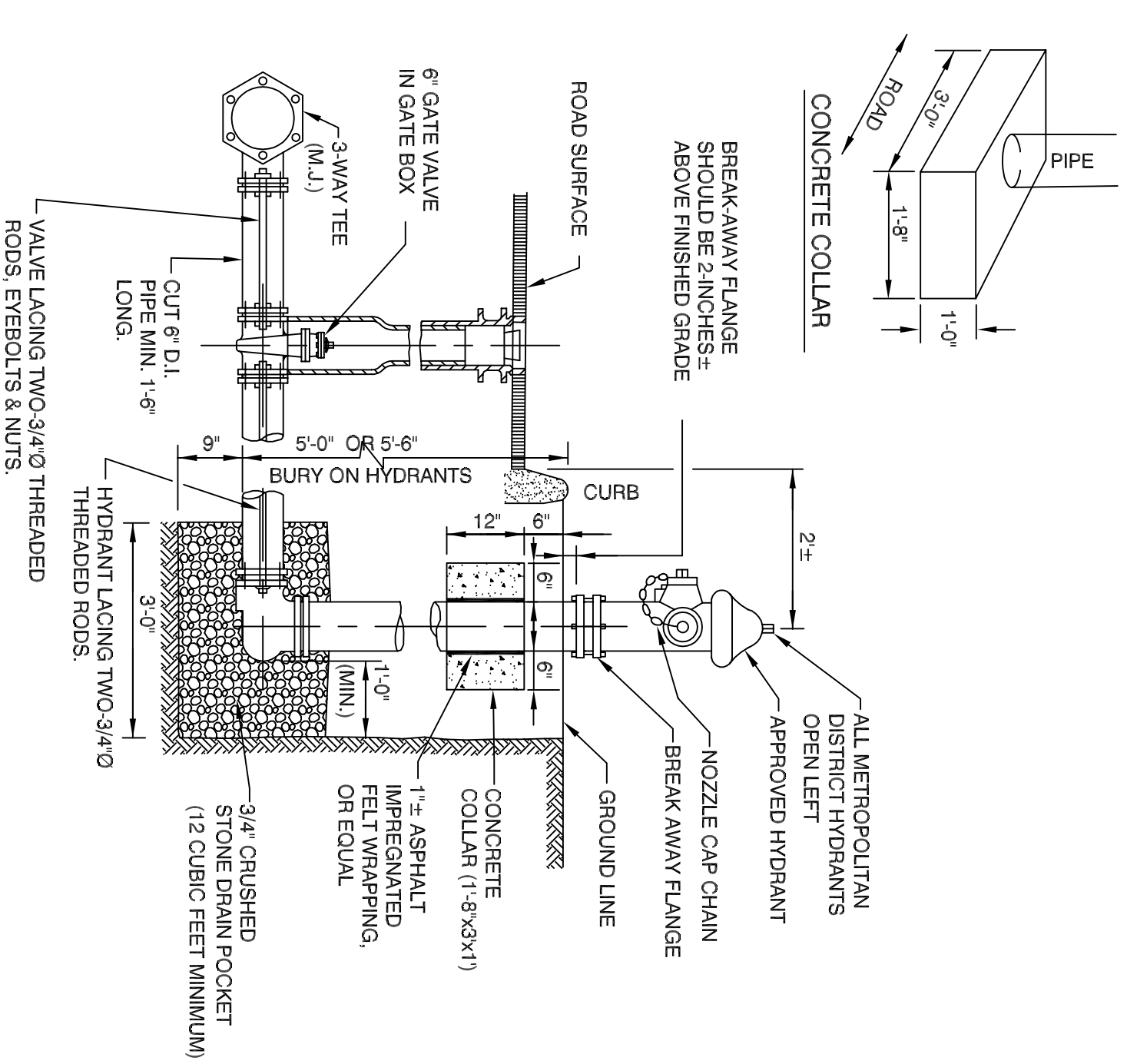




FIRE HYDRANT ASSEMBLY  
TYPICAL HYDRANT TEE INSTALLATION  
WITH LACING RODS

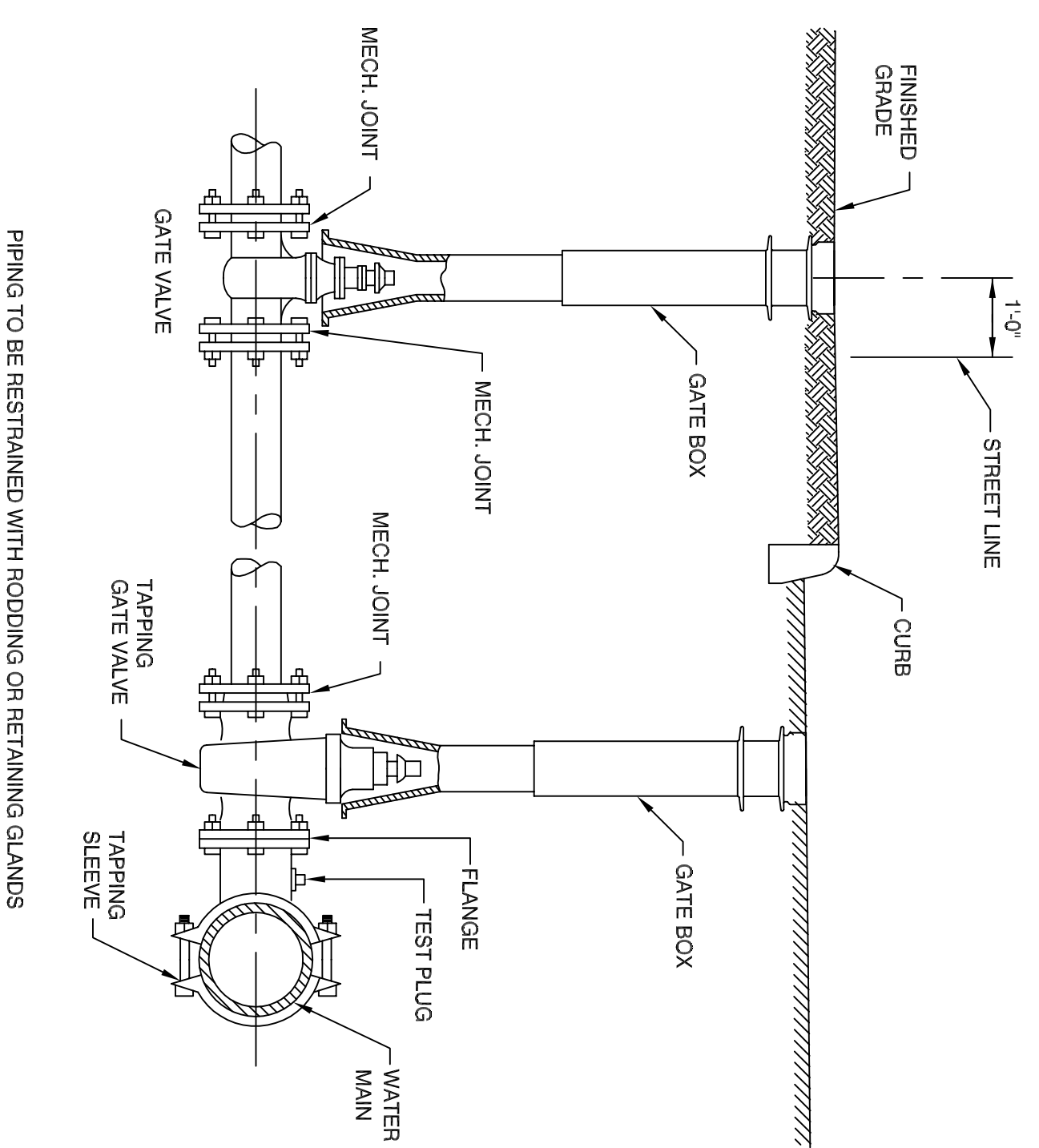
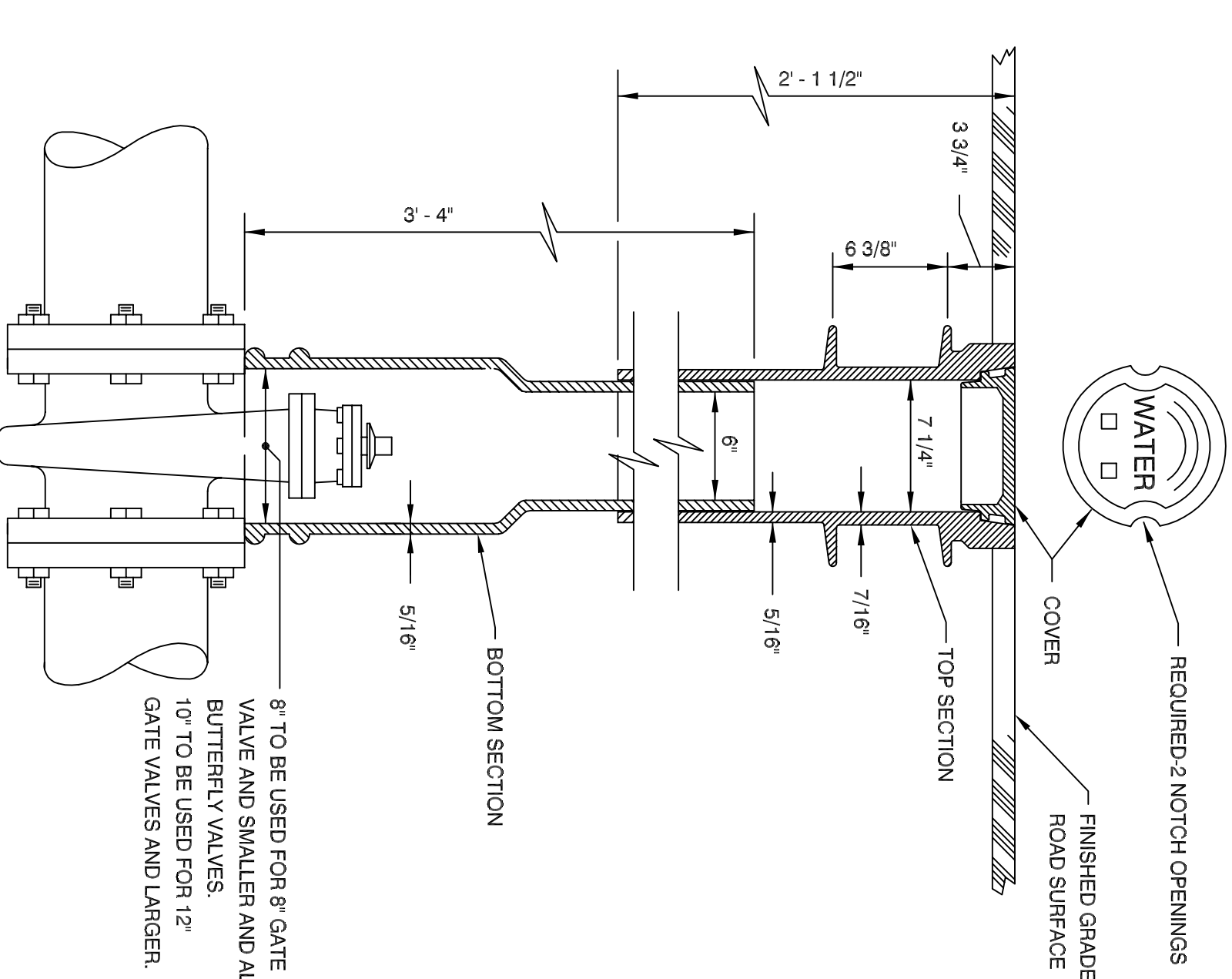


FIRE HYDRANT ASSEMBLY  
TYPICAL RETAINING GLAND  
INSTALLATION

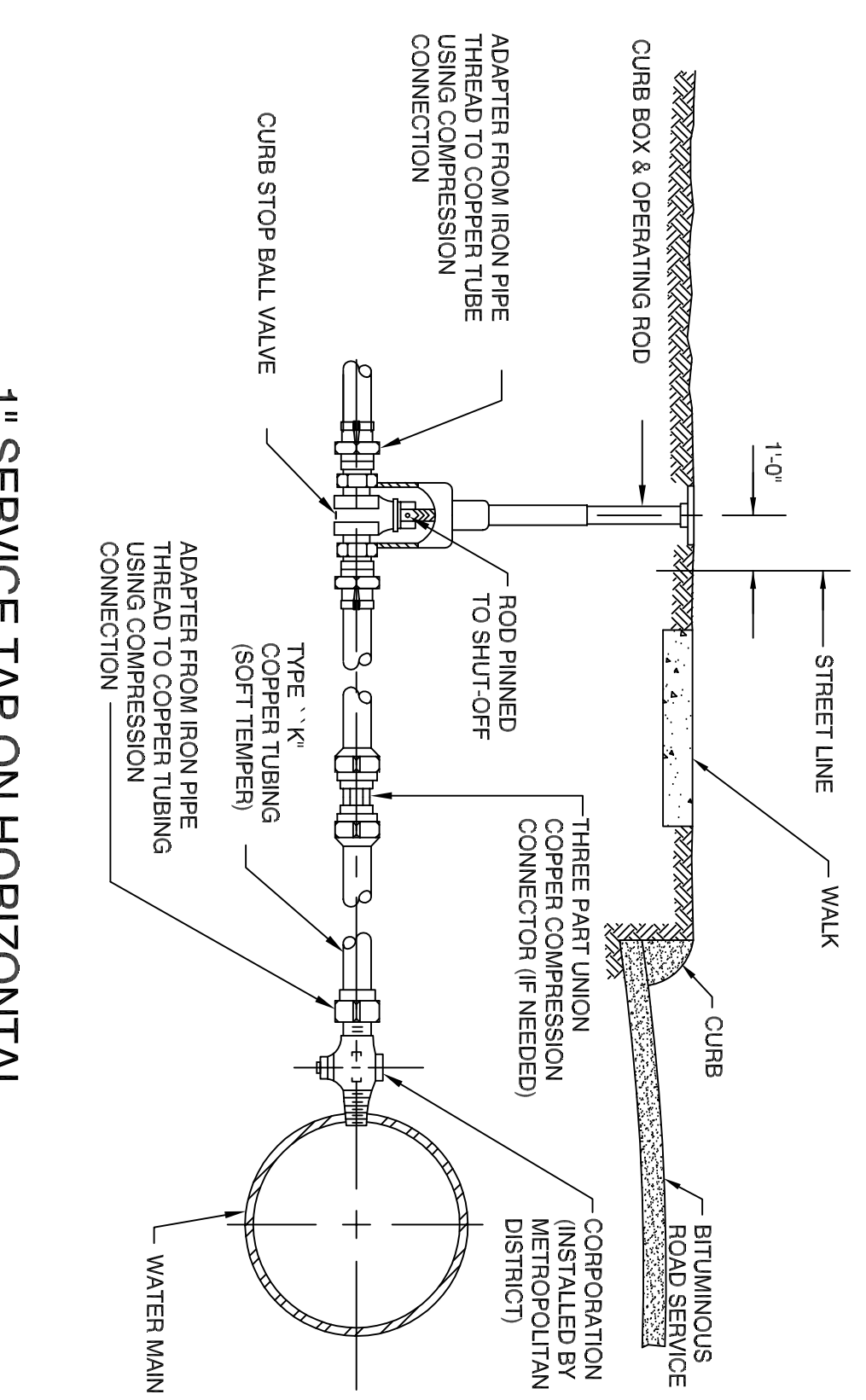


FIRE HYDRANT ASSEMBLY  
TYPICAL RODDING INSTALLATION

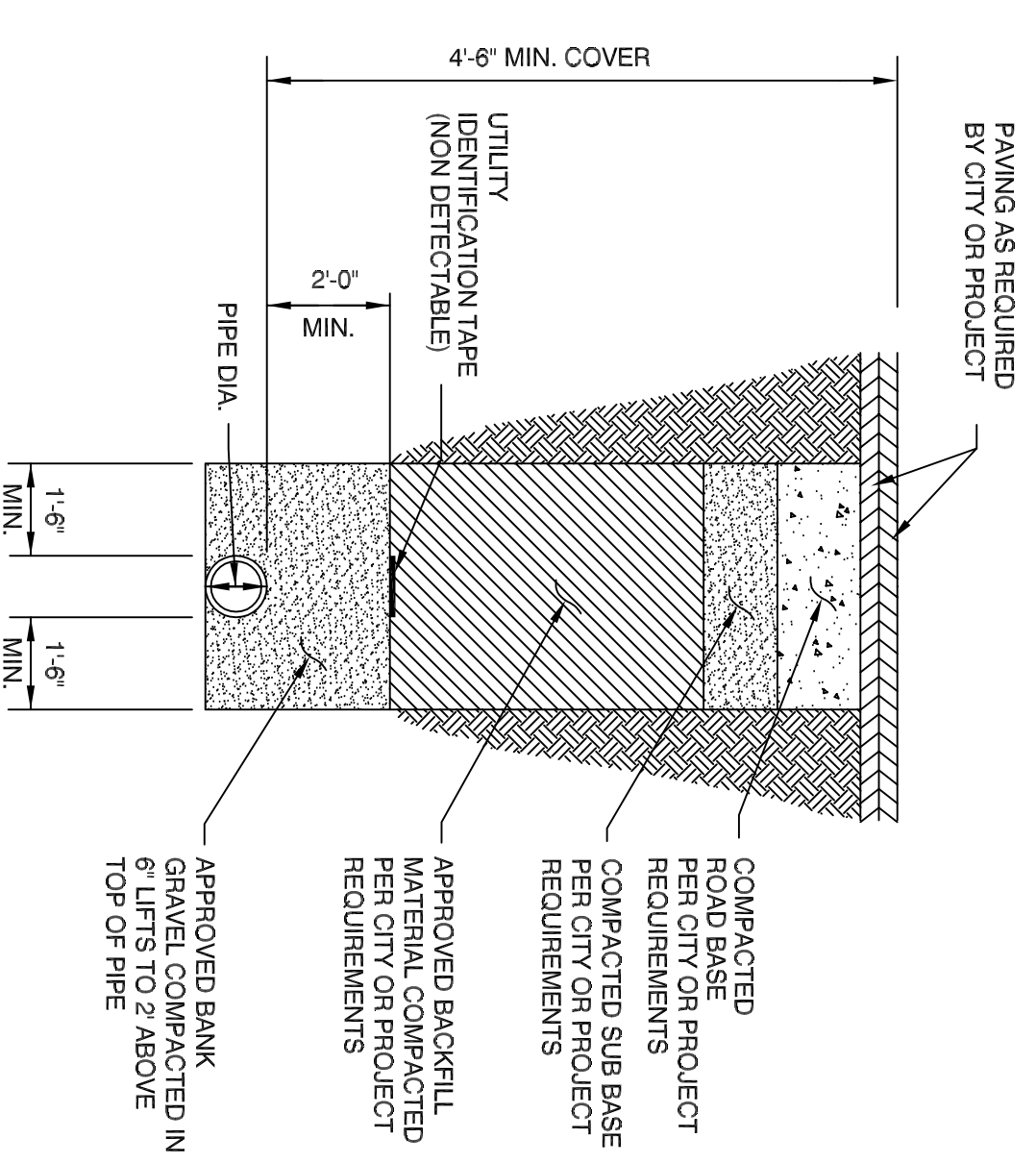
STANDARD GATE BOX  
DWYER TYPE



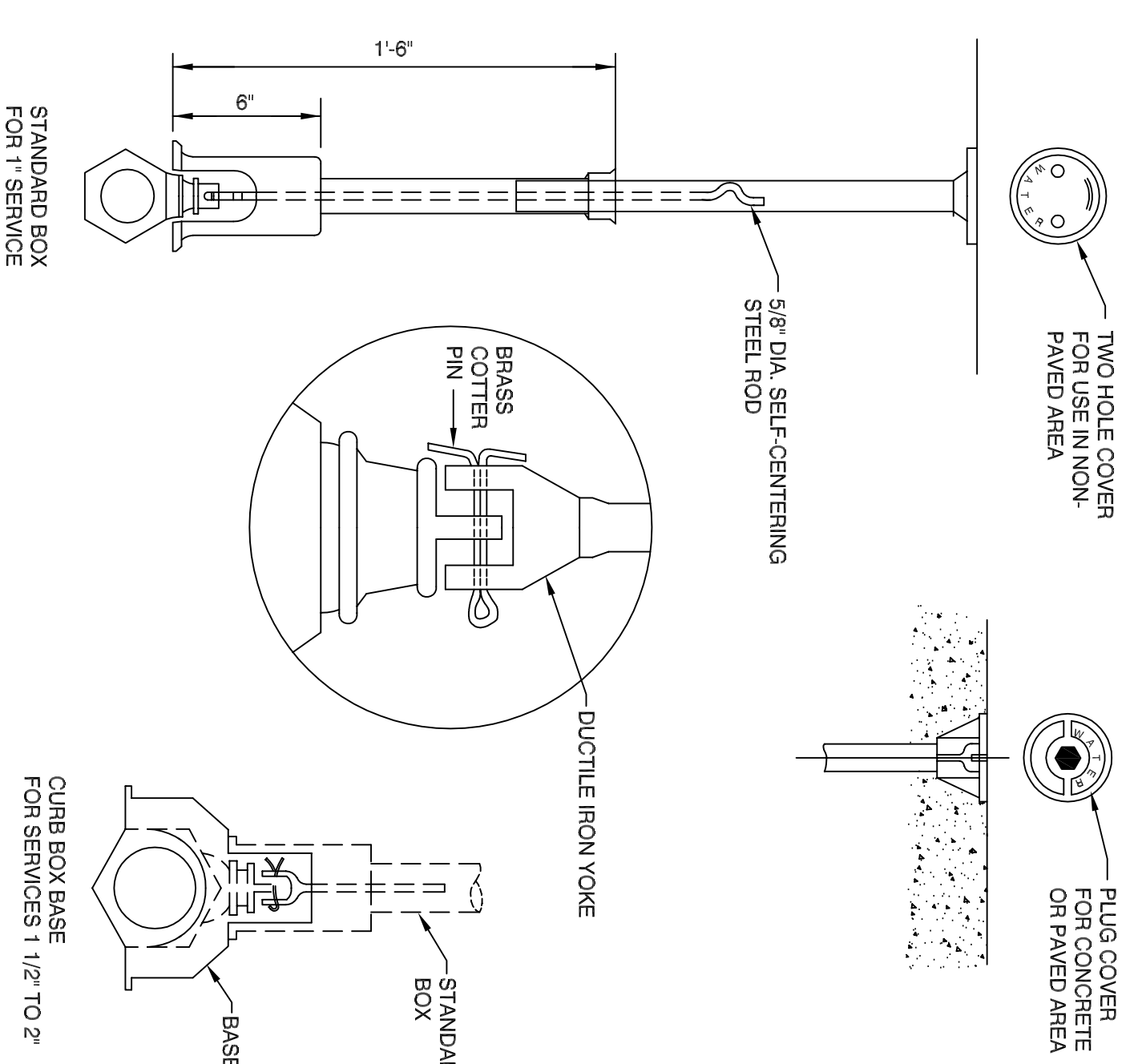
SERVICES 4" THROUGH 8"



1" SERVICE TAP ON HORIZONTAL  
CENTER LINE



TYPICAL WATER MAIN TRENCH  
CROSS SECTION



STANDARD SERVICE CURB BOX

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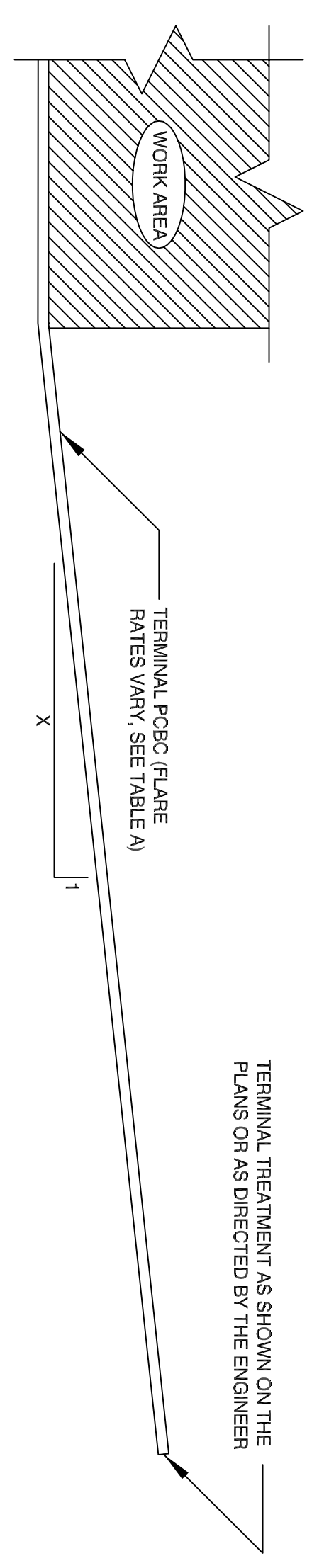
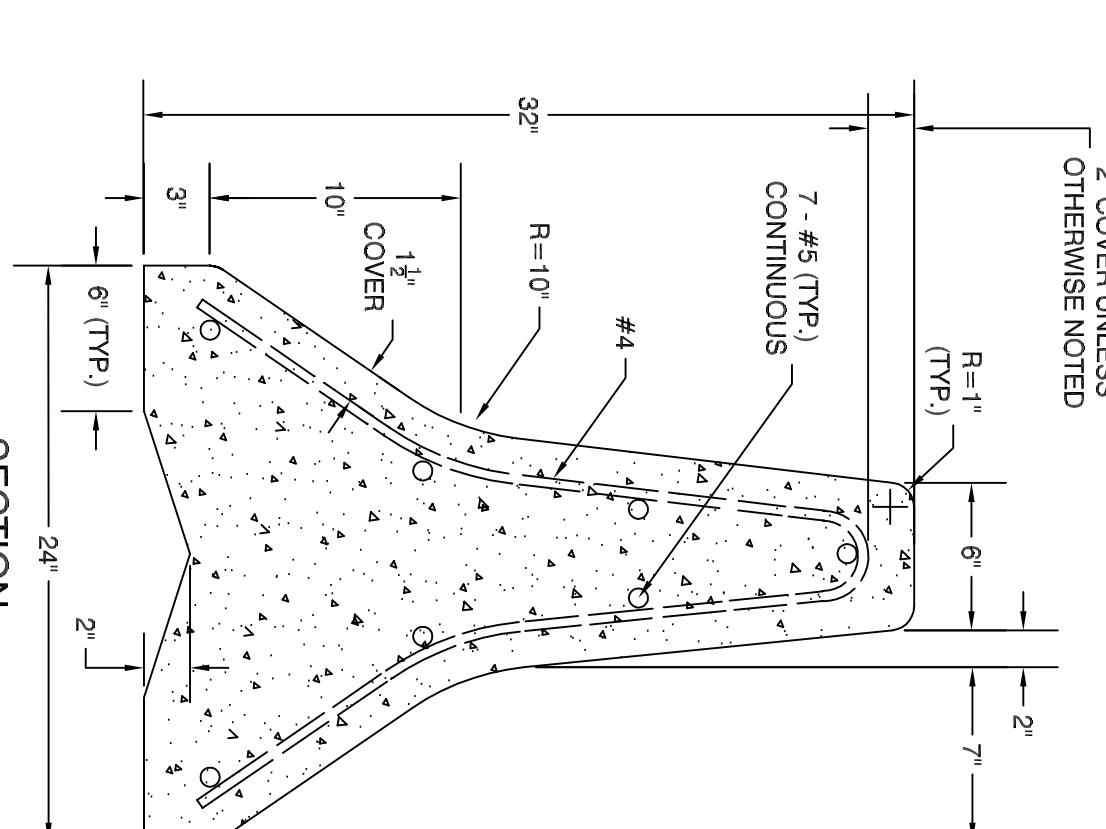
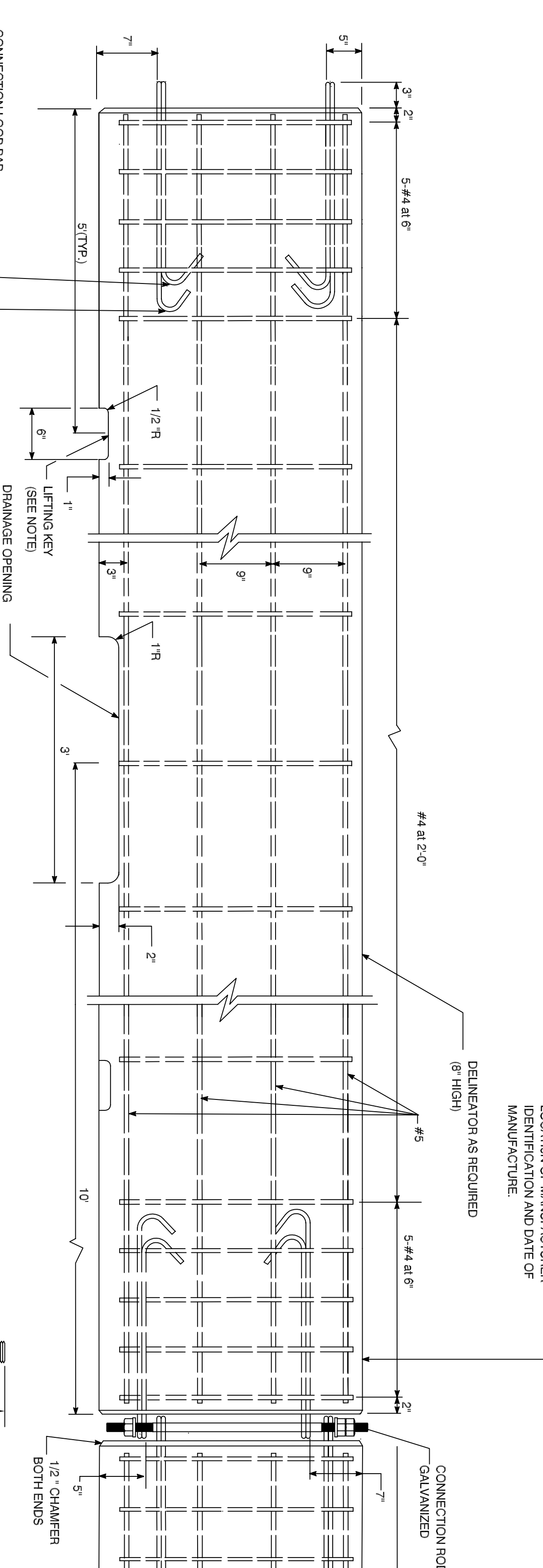
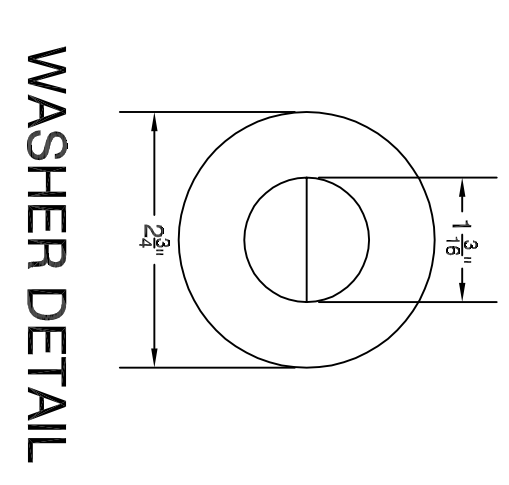
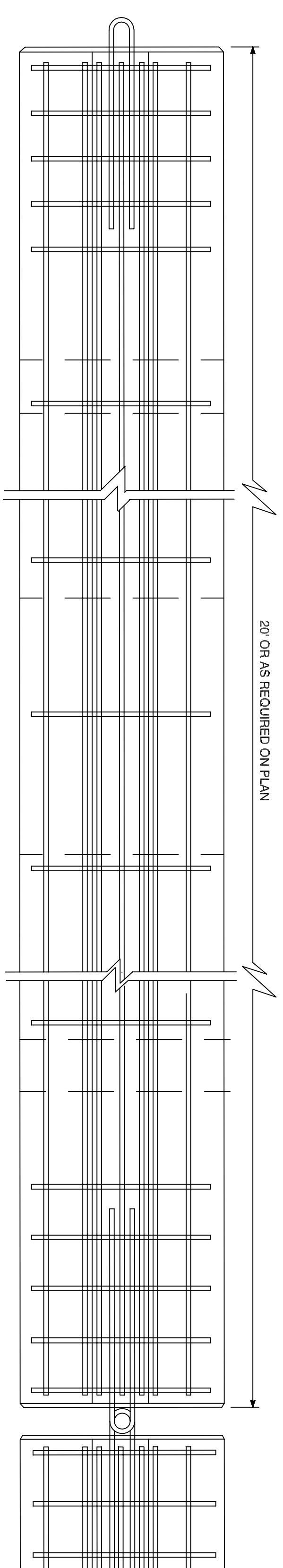
Standard Drawing No. SR-9	Job No.	Date January 2005
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City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Domestic Water Supply/Hydrants



Sheet No.  
File Name  
SR-9.DWG



TERMINAL TREATMENT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER

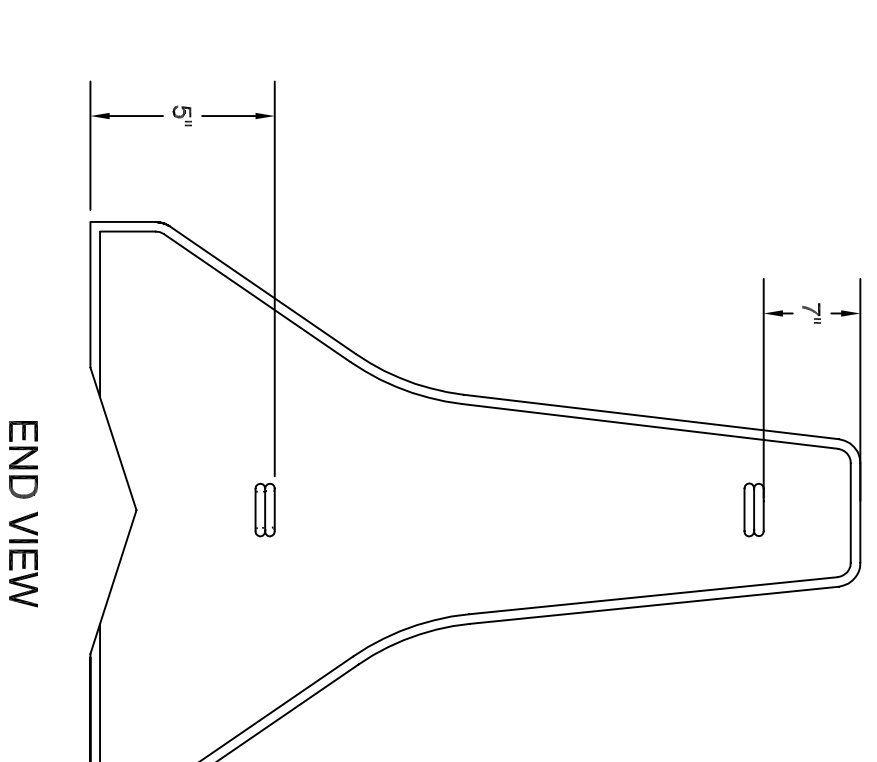
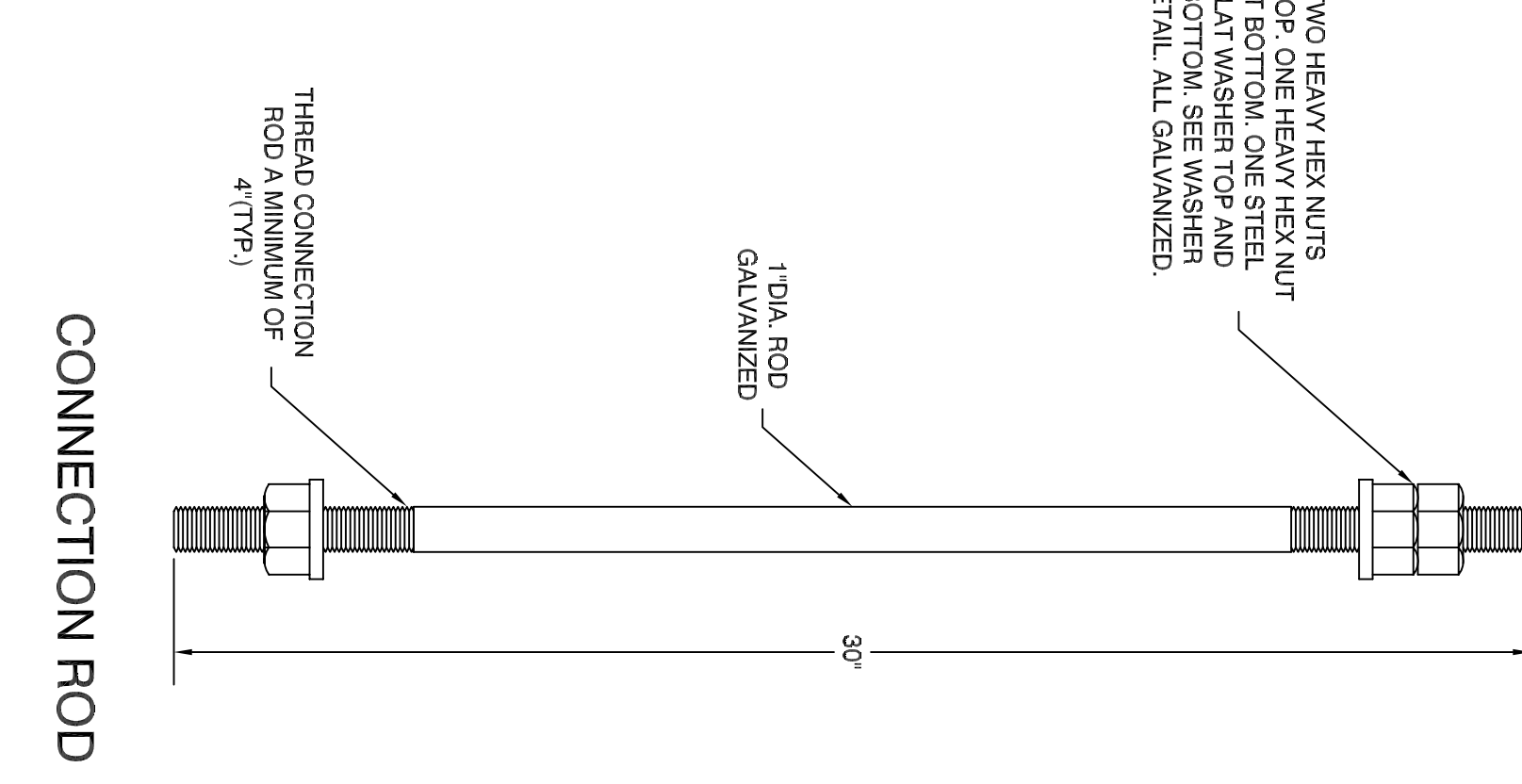
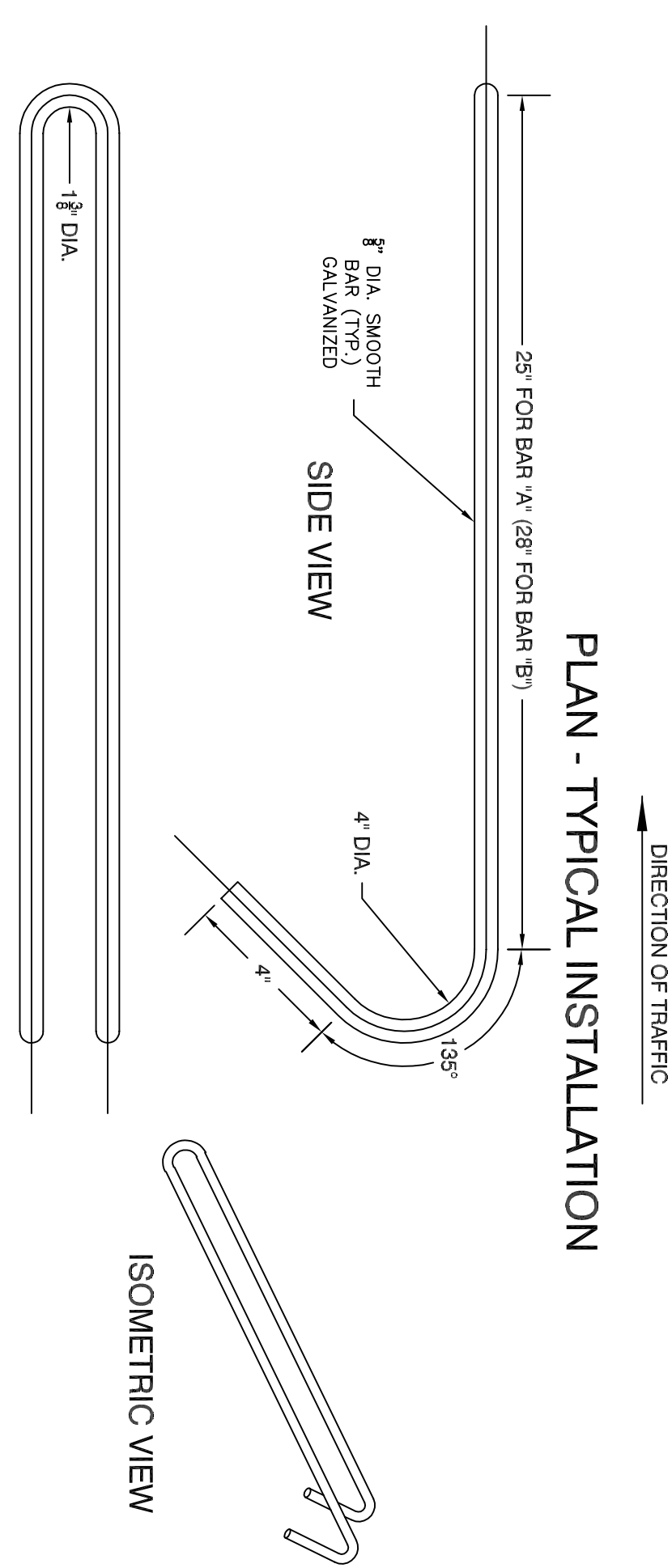


TABLE "A"	
FLARE RATES	FLARE RATE **
SPEED * 30 MPH OR LESS	4 : 1
31 TO 45 MPH	6 : 1
GREATER THAN 45 MPH	8 : 1

\* ANTICIPATED TRAVEL SPEED ADJACENT TO THE WORK AREA  
 \*\* 10 : 1 FLARE RATE TO BE USED FOR ALL FREEWAYS.

TOP VIEW  
 CONNECTION LOOP BAR  
 PRE-CAST CONCRETE BARRIER CURB

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Standard Drawing No. SR-10	Job No.	Date January 2005
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<b>City of Hartford, Connecticut</b> Department of Public Works <b>Standard Roadway and Street Details</b> Precast Concrete Barrier Curb & Full Depth Roadway Patching		Sheet No. File Name SR-10.DWG
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Series	Sign No.	Area Sq. Ft.	Size (Inches)	Qty	Material	Notes
R1 - SERIES	R1-1	12X18	31-0537	1	080	STOP
	R1-2	12X18	31-0523	1	080	SPEED LIMIT 00
R2 - SERIES	R2-1	12X18	31-0537	1	080	STOP
	R2-2	12X18	31-0523	1	080	SPEED LIMIT 00
R3 - SERIES	R3-1	12X18	31-0537	1	080	STOP
	R3-2	12X18	31-0523	1	080	SPEED LIMIT 00
R4 - SERIES	R4-1	12X18	31-0537	1	080	STOP
	R4-2	12X18	31-0523	1	080	SPEED LIMIT 00
R5 - SERIES	R5-1	12X18	31-0537	1	080	STOP
	R5-2	12X18	31-0523	1	080	SPEED LIMIT 00
R6 - SERIES	R6-1	12X18	31-0537	1	080	STOP
	R6-2	12X18	31-0523	1	080	SPEED LIMIT 00

THE LEGEND HARTFORD TRAFFIC AUTHORITY SHALL APPEAR ON ALL R7 - SERIES SIGNS EXCEPT WHEN SUFFIXED WITH THE LETTER Z.

FOR SPECIFIC SIGN DESIGN CONTACT HARTFORD DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERNS REFER TO FHWA PUBLICATION STANDARD HIGHWAY SIGNS AS SPECIFIED IN THE MUTCD. SIGNS OF DIFFERENT DIMENSIONS TO BE ERected ON THE SAME POSTS OR SPANNING/ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.

POSTS - SEE SHEET ST-6 - TYPICAL METAL SIGN POSTS.

POST TYPE - POST TYPES SHALL BE AS INDICATED ON THE DRAWINGS OR AS ORDERED BY THE ENGINEER.

FOR OVERHEAD MOUNTED SIGNS SEE TYPICAL SIGNAL SHEET - "MISC. TRAFFIC SIGNAL INSTALLATION DETAILS" - STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION.

SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPlicing OF SHEET ALUMINUM WILL NOT BE ACCEPTED.

BACKGROUND SHEETING ON OVERHEAD MOUNTED SIGNS SHALL BE TYPE III REFLECTIVE SHEETING. ALL OTHER BACKGROUND SHEETING SHALL BE TYPE I REFLECTIVE SHEETING EXCEPT NOTED BY \*.

COLORS:

R SERIES

BACKGROUND - SILVER (EXCEPT AS NOTED)

LEGEND - BLACK (EXCEPT AS NOTED)

ALL COLORS SHALL BE REFLECTORIZED WITH THE EXCEPTION OF BLACK WHICH SHALL BE OPAQUE.

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Standard Drawing No. ST-2

Job No.

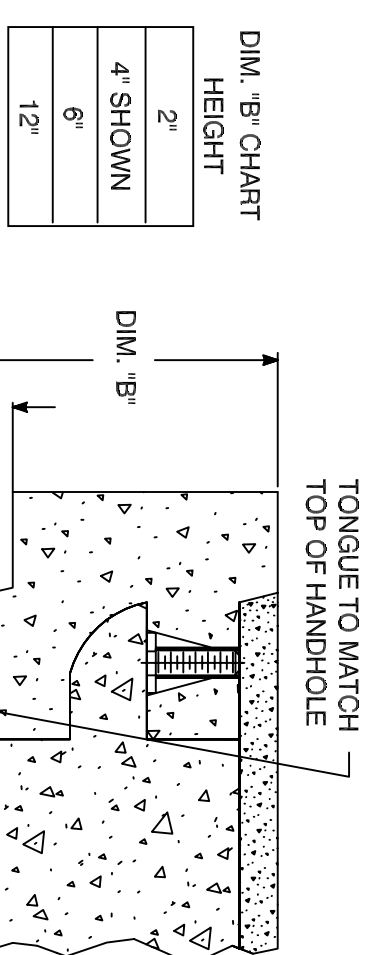
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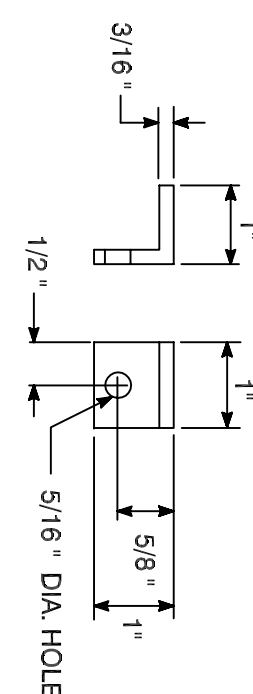
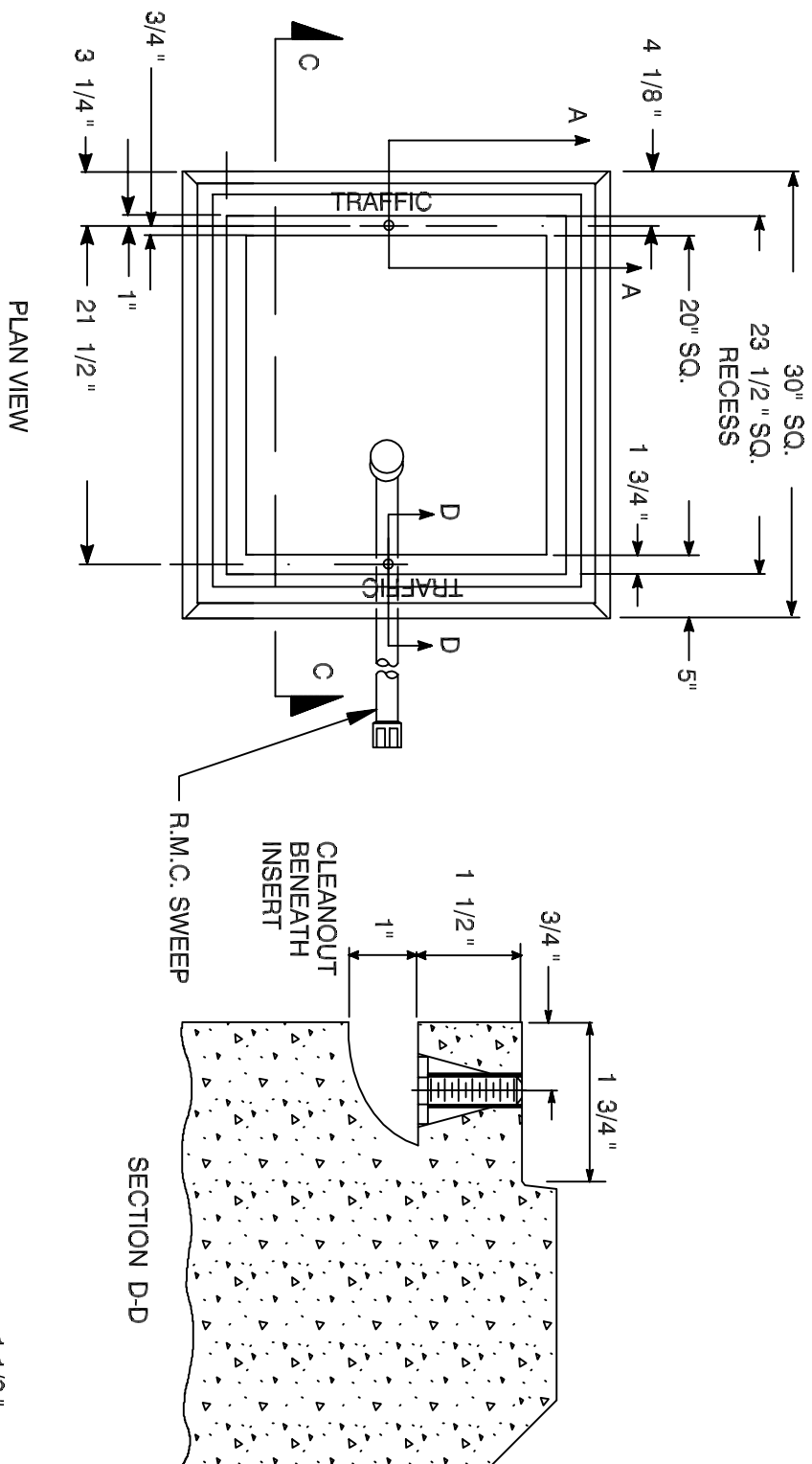
City of Hartford, Connecticut  
Department of Public Works  
Standard Traffic/Equipment Details  
Regulatory Signs



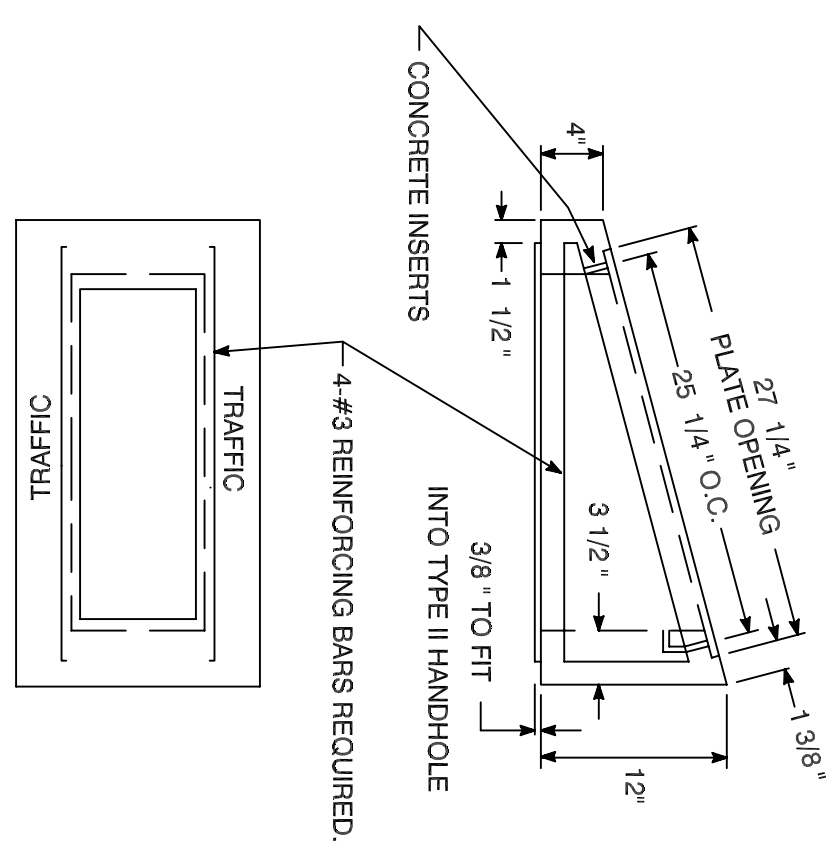
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File Name  
ST-2.DWG



**HANDHOLE EXTENSIONS**  
12 - #8 REINFORCING BARS REQD

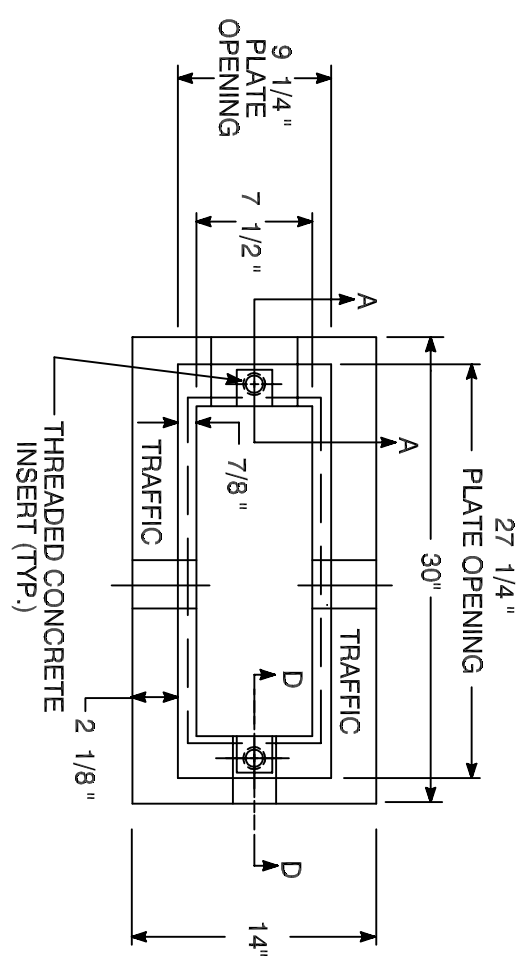


**STEEL GROUNDING TAB**

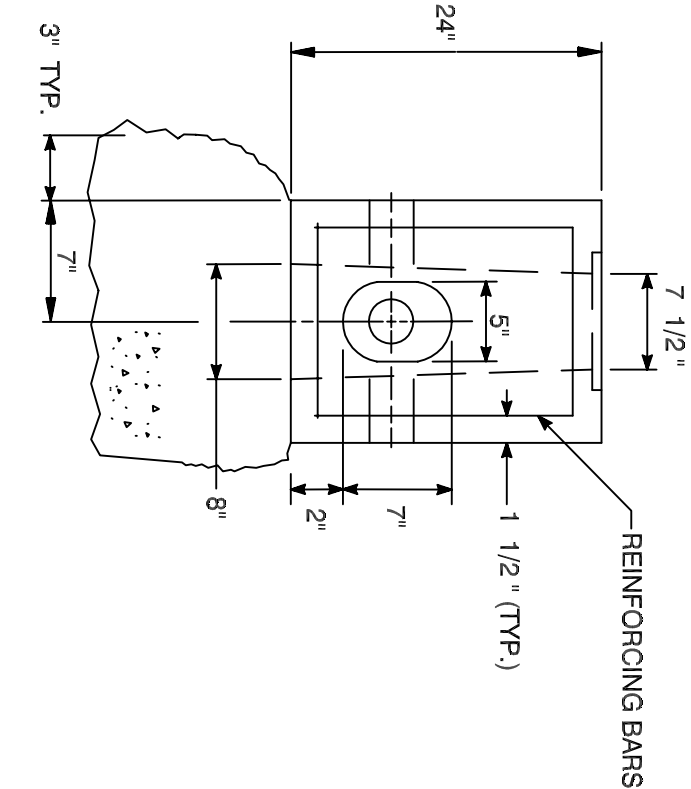
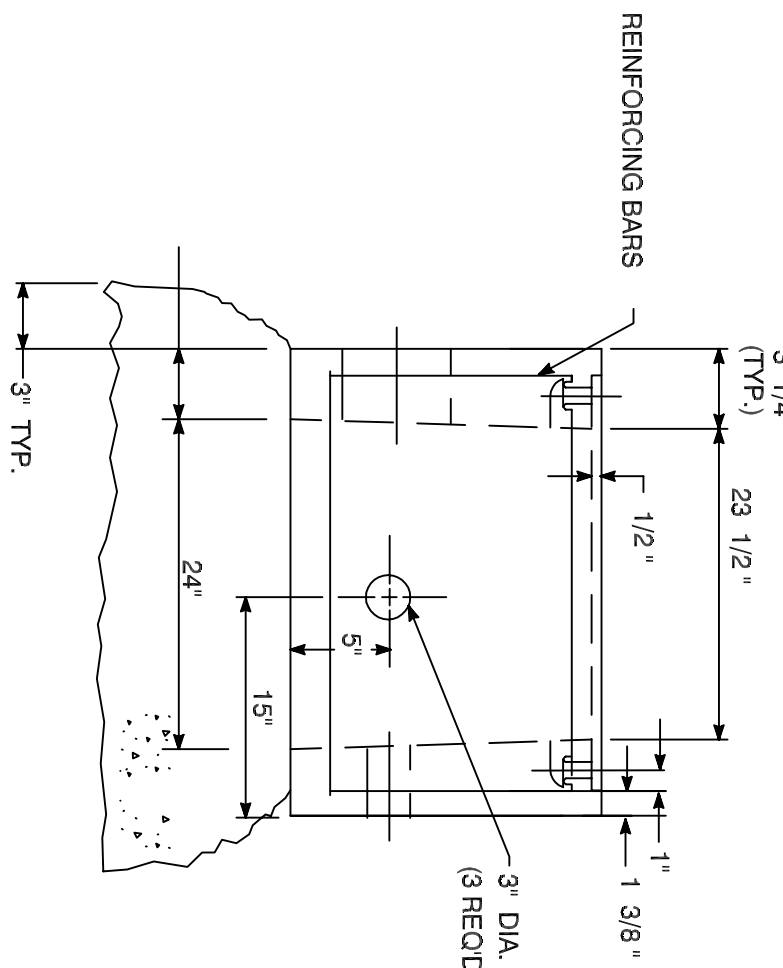
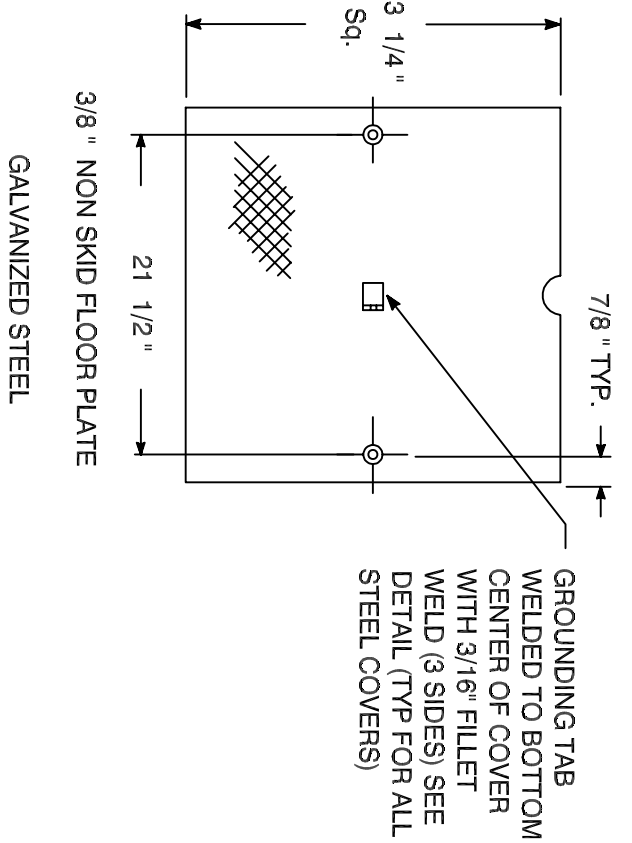


**CONCRETE HANDHOLE TYPE II BANK ADAPTER**

TOP VIEW DIMENSIONS AND SECTION VIEWS SAME AS CONCRETE HANDHOLE



**HANDHOLE COVERS**



- NOTES:**
1. BLOCK UNUSED OPENINGS OF HANDHOLE ON THE OUTSIDE WITH PRESSURE TREATED PLYWOOD.
  2. GROUT AROUND ALL CONDUITS
  3. USE 1 1/2" X 3" CONCRETE INSERT, STANDARD THREAD, STAINLESS STEEL, FLAT HEAD BOLT, RECESSED IN PLATE COVER, INSERTS TO HAVE CLEANOUTS.
  4. TYPE II HANDHOLE 30" SIDE INSTALLED PARALLEL TO ROAD UNLESS OTHERWISE NOTED.
  5. CAST THE WORD "TRAFFIC" ON TO TOP EDGE OF HANDHOLE, 1 1/2" LETTERS.
  6. WHERE AN EXISTING CONCRETE SIDEWALK SLAB ADJUTING A HANDHOLE IS DAMAGED OR CUT DURING INSTALLATION THE ENTIRE SECTION SHALL BE REPLACED.
  7. 12 - #3 REINFORCING BARS REQUIRED FOR ALL HANDHOLES.

**CONCRETE HANDHOLE CLASS "A" CONCRETE**

SCREENED DRAIN WHERE REQUIRED ON CONCRETE DIRECTED BY THE ENGINEER

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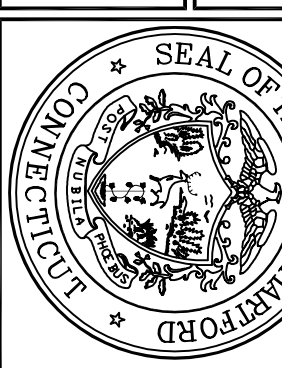
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Job No.

Date January 2005

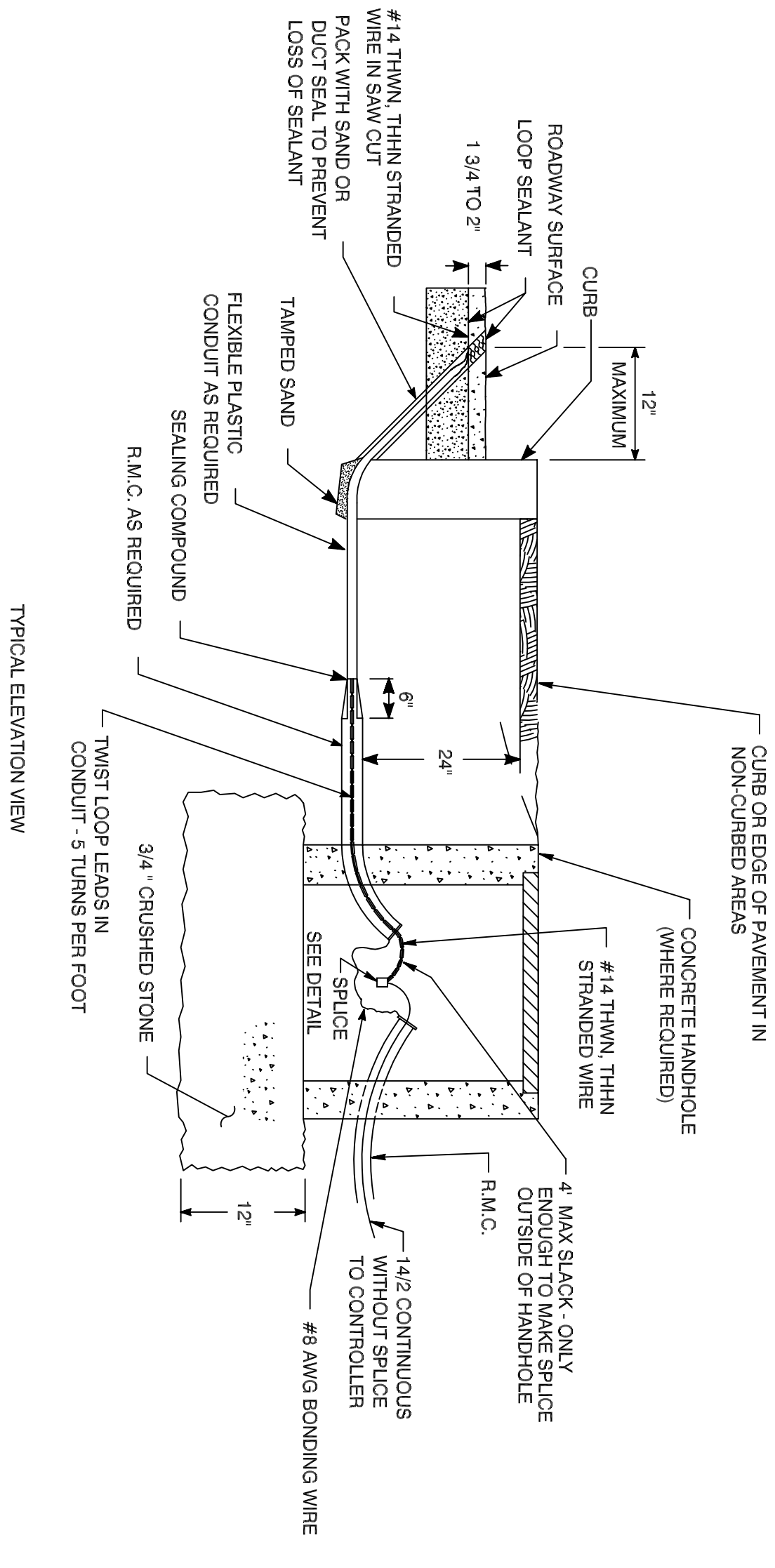


**City of Hartford, Connecticut**  
Department of Public Works  
**Standard Traffic/Equipment Details**  
Handholes and Vehicle Detectors



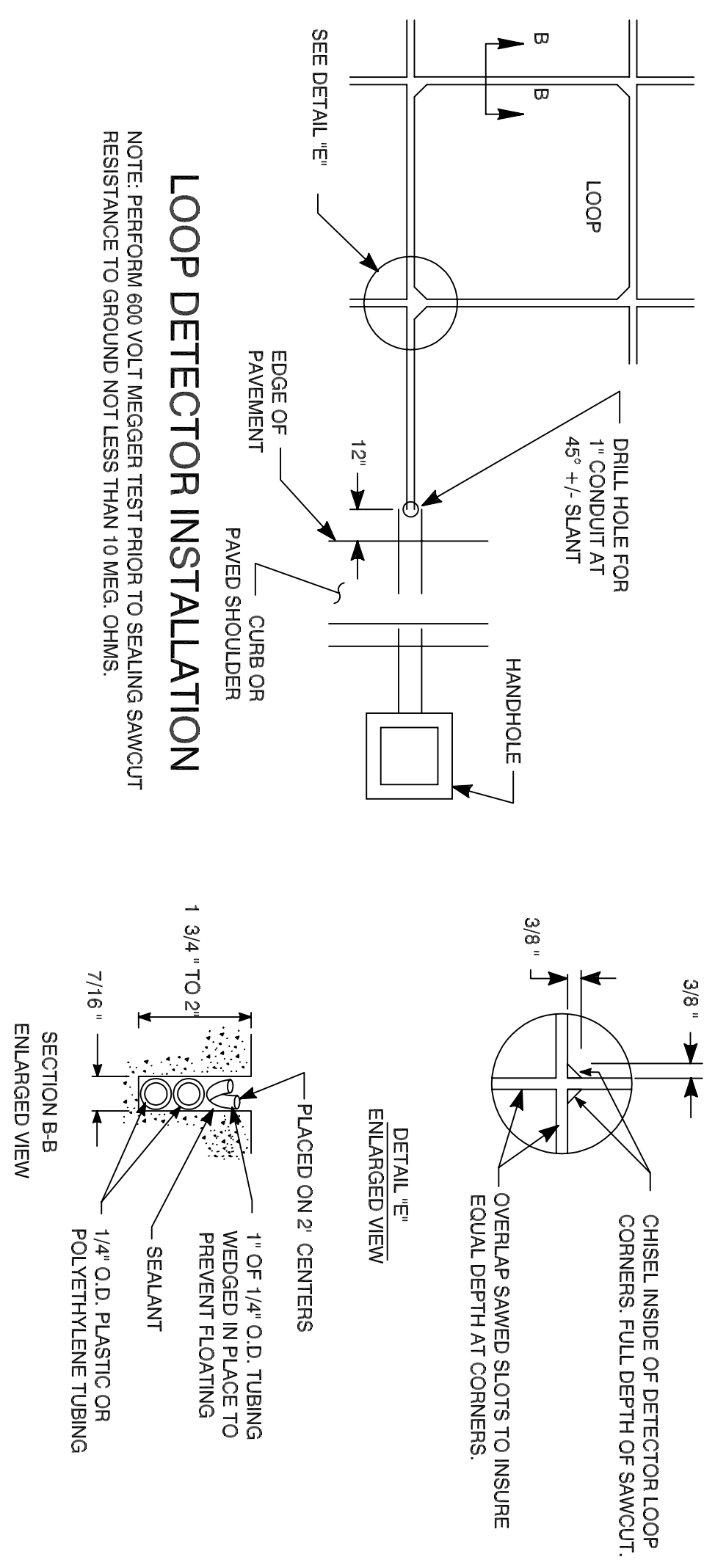
Sheet No.  
File Name  
ST-3.DWG

**LOOP DETECTOR SAW CUT AND LEAD-IN**



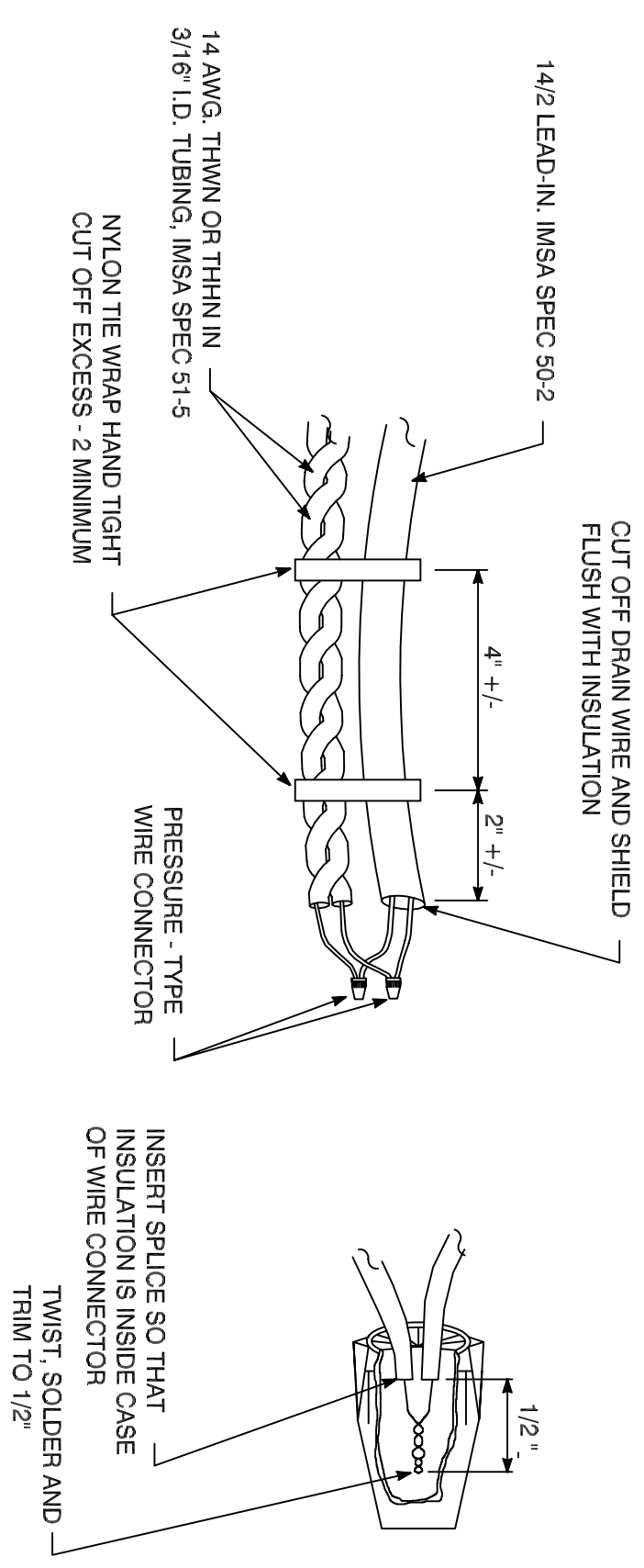
**LOOP DETECTOR INSTALLATION**

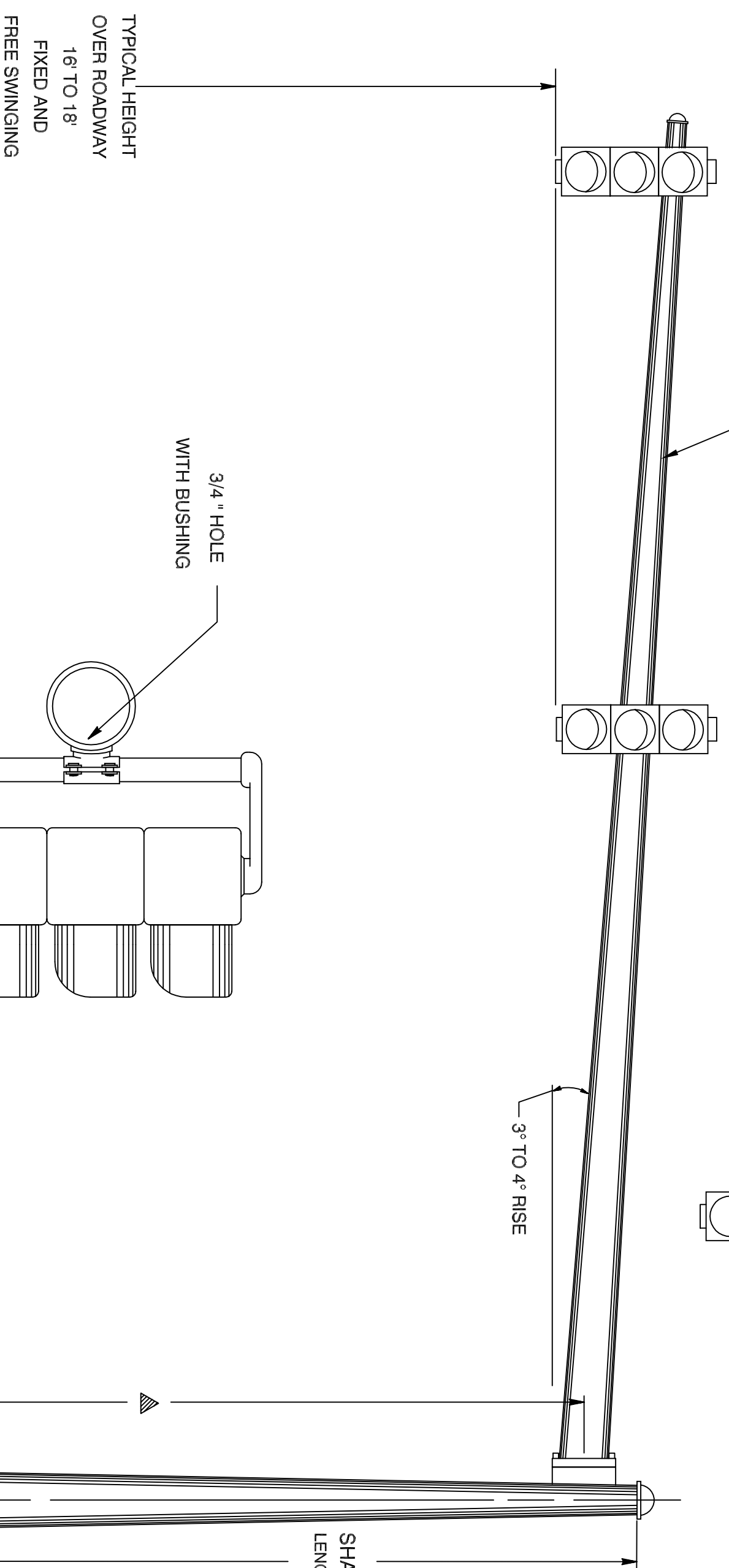
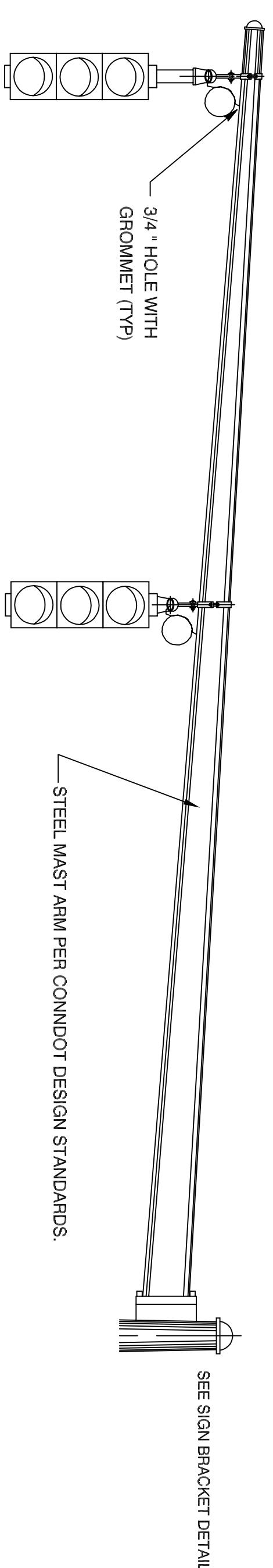
NOTE: PERFORM 600 VOLT MEGGER TEST PRIOR TO SEALING SAWCUT RESISTANCE TO GROUND NOT LESS THAN 10 MEG. OHMS.



**LOOP DETECTOR SPLICES**

NOTE: WATER RESISTANT CONNECTOR DESIGNED FOR WET, DAMP AND CORROSIVE APPLICATIONS. ONE TIME USE ONLY. DISCARD ALL REMOVED CONNECTORS.



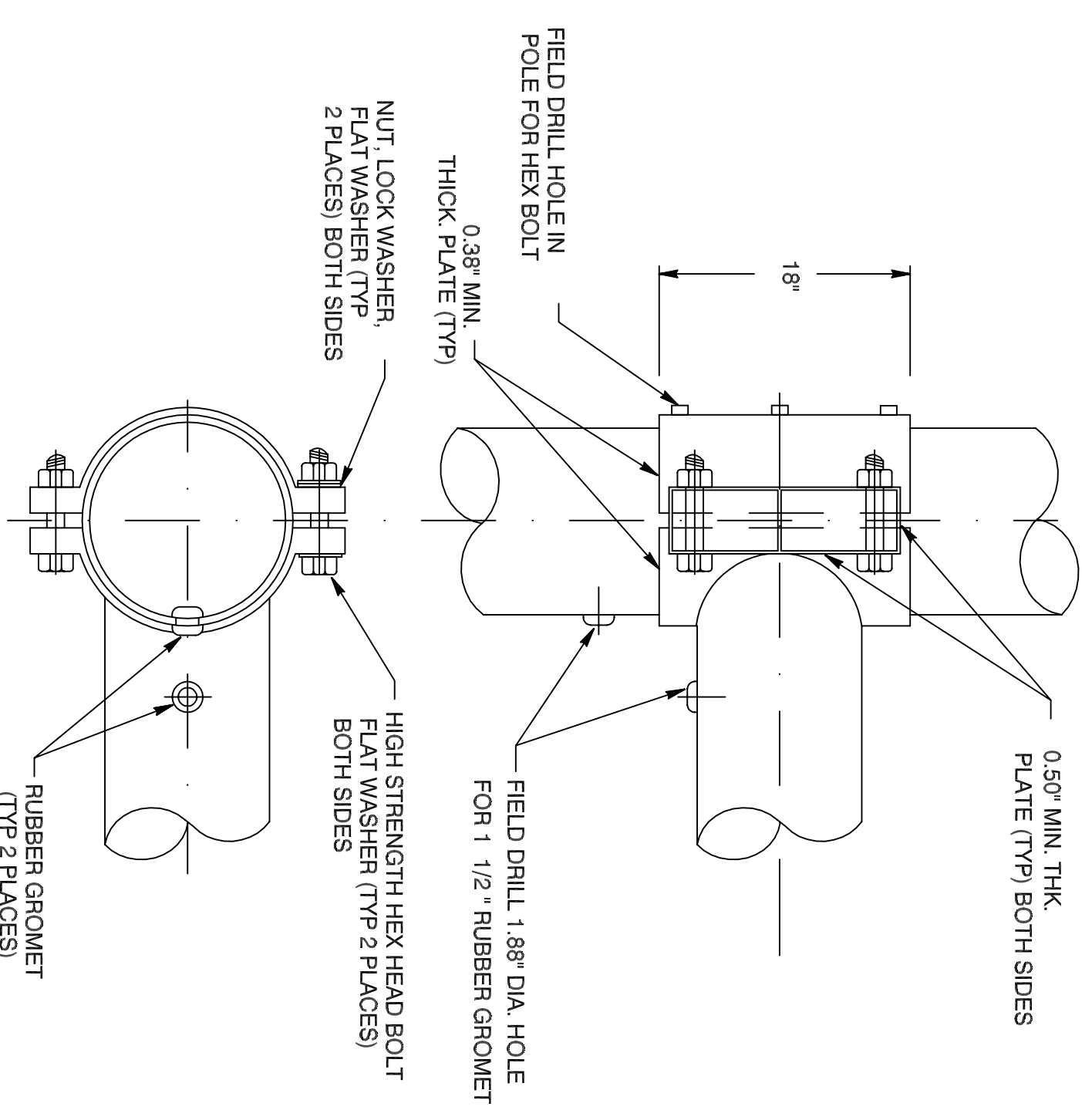


SIDE VIEW OF FIXED MOUNTING ASSEMBLY



STEEL MAST ARM ASSEMBLY

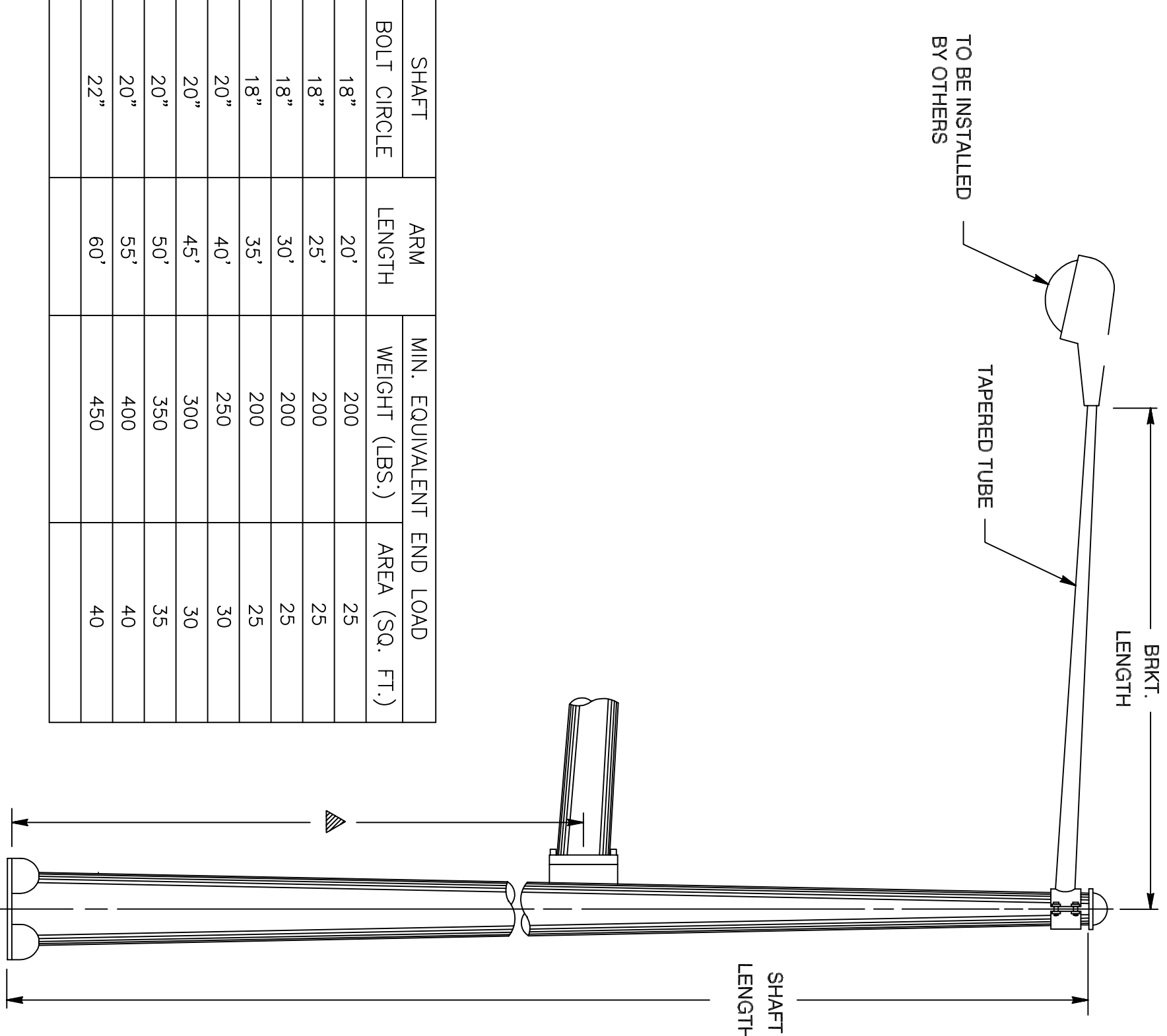
ADJUSTABLE ARM CLAMP



NOTE:  
CLAMP RANGE 36° - 18° UP & 18° DOWN FROM SPECIFIED ATTACHMENT HEIGHT.

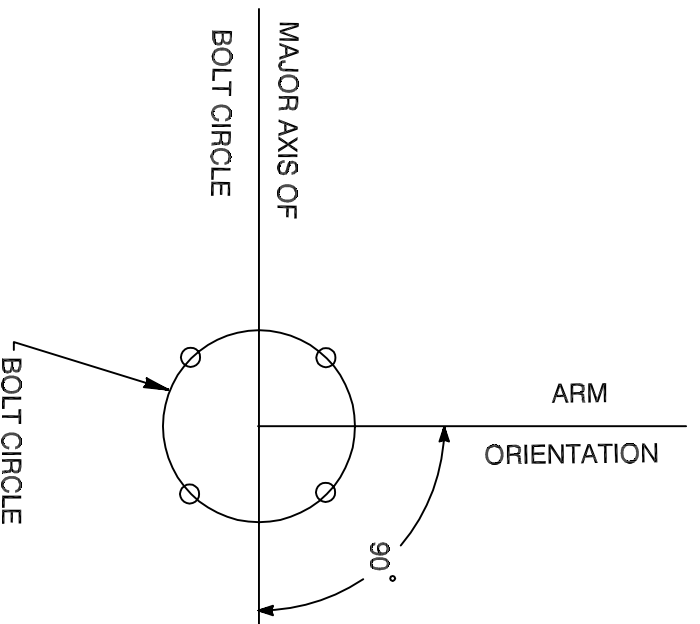
SHAFT BOLT CIRCLE	ARM LENGTH	MIN. EQUIVALENT WEIGHT (LBS.)	END LOAD AREA (SQ. FT.)
18"	20'	200	25
18"	25'	200	25
18"	30'	200	25
18"	35'	200	25
20"	40'	250	30
20"	45'	300	30
20"	50'	350	35
20"	55'	400	40
22"	60'	450	40

STEEL MAST ARM WITH LUMINAIRE

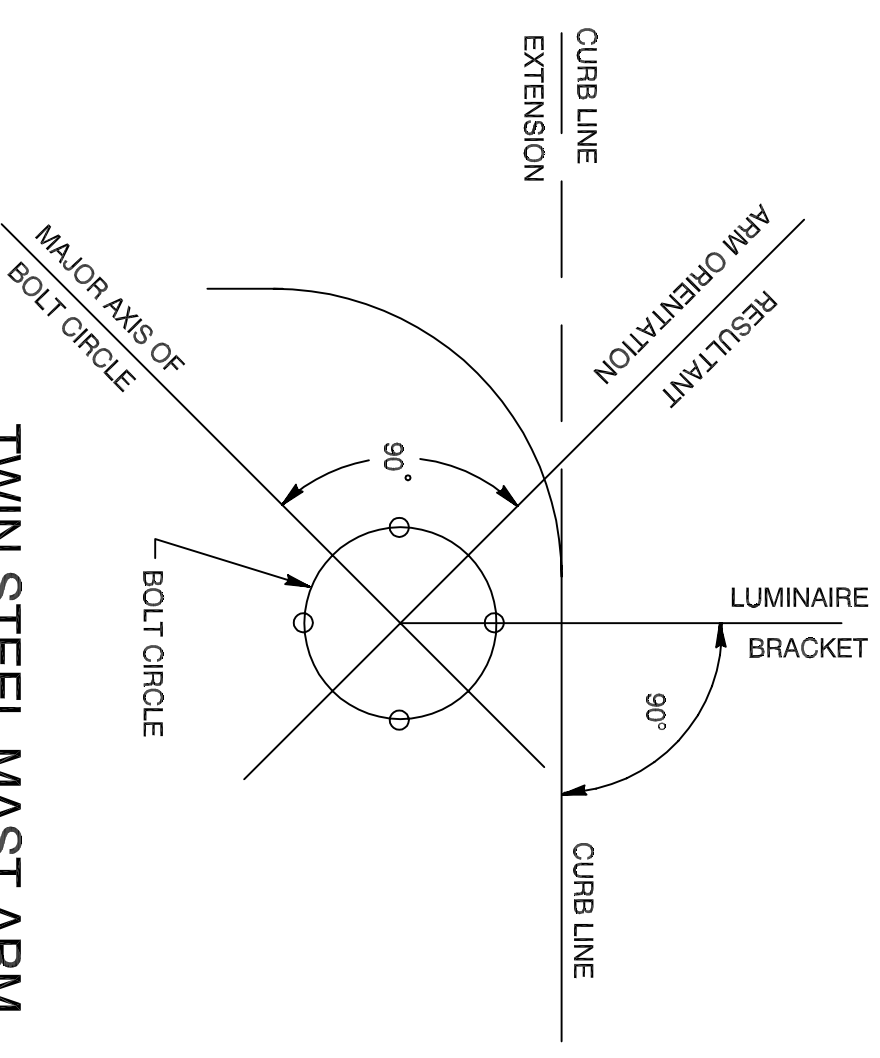


**MAST ARM ASSEMBLY NOTES:**

- SHAFT LENGTH IS INDICATED ON THE SIGNAL PLAN.
- ▲ FIXED ARM ATTACHMENT HEIGHT IS SHOWN ON THE MAST ARM DETAIL EITHER ON THE PLAN OR IN THE SPECIAL PROVISIONS. ARM HEIGHT IS DEPENDENT ON THE SITE ELEVATIONS, UTILITY CABLE & TRAFFIC SIGNAL MOUNTING HEIGHTS.
- CONTRACTOR SHALL VERIFY SHAFT LENGTHS AND ARM LENGTHS PRIOR TO ORDERING MAST ARMS.
- FIXED MOUNT TRAFFIC SIGNALS UNLESS INDICATED ON PLAN AS "FREE SWINGING".
- TWIN ARM ANGLE IS 90° UNLESS OTHERWISE SHOWN ON PLAN.
- THE WEIGHT AND AREA OF EACH SIGNAL ASSEMBLY ON THE MAST ARM IS CONVERTED TO MOMENTS AROUND THE SHAFT, THEN SUMMED AND DIVIDED BY THE TOTAL ARM LENGTH TO PRODUCE AN EQUIVALENT WEIGHT END LOAD AND EQUIVALENT AREA END LOAD. THE EQUIVALENT WEIGHT END LOAD OF TWIN ARMS IN RESULTANT VECTOR OF BOTH ARMS.
- ADJUSTABLE ARMS MAY BE SUBSTITUTED AS APPROVED EQUALS.
- LONGITUDINAL SEAM WELD WITHIN DOWNWARD SIDE OF ARM (NOT IN TENSION ZONE); INTERSECTING WELDS ARE NOT ALLOWED, SUCH AS LONGITUDINAL SEAM AND BASE PLATE FILLET.
- SHOP DRAWINGS FOR MAST ARMS SHALL BEAR THE SEAL OF A CONNECTICUT LICENSED PROFESSIONAL ENGINEER.
- THE MAST ARM DESIGN MUST CONFORM TO THE MOST CURRENT CONNODOT DESIGN STANDARDS.



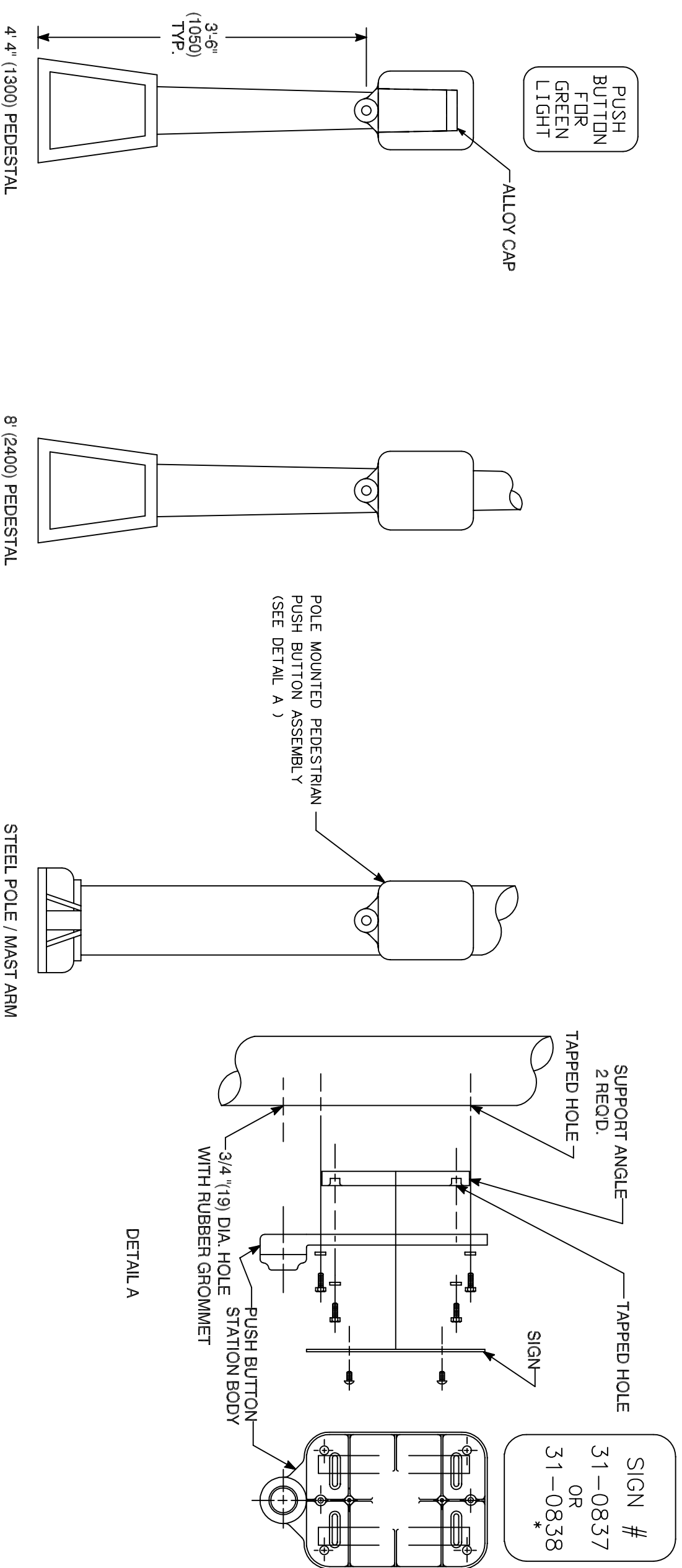
SINGLE STEEL MAST ARM BOLT ORIENTATION DETAIL



TWIN STEEL MAST ARM BOLT ORIENTATION DETAIL

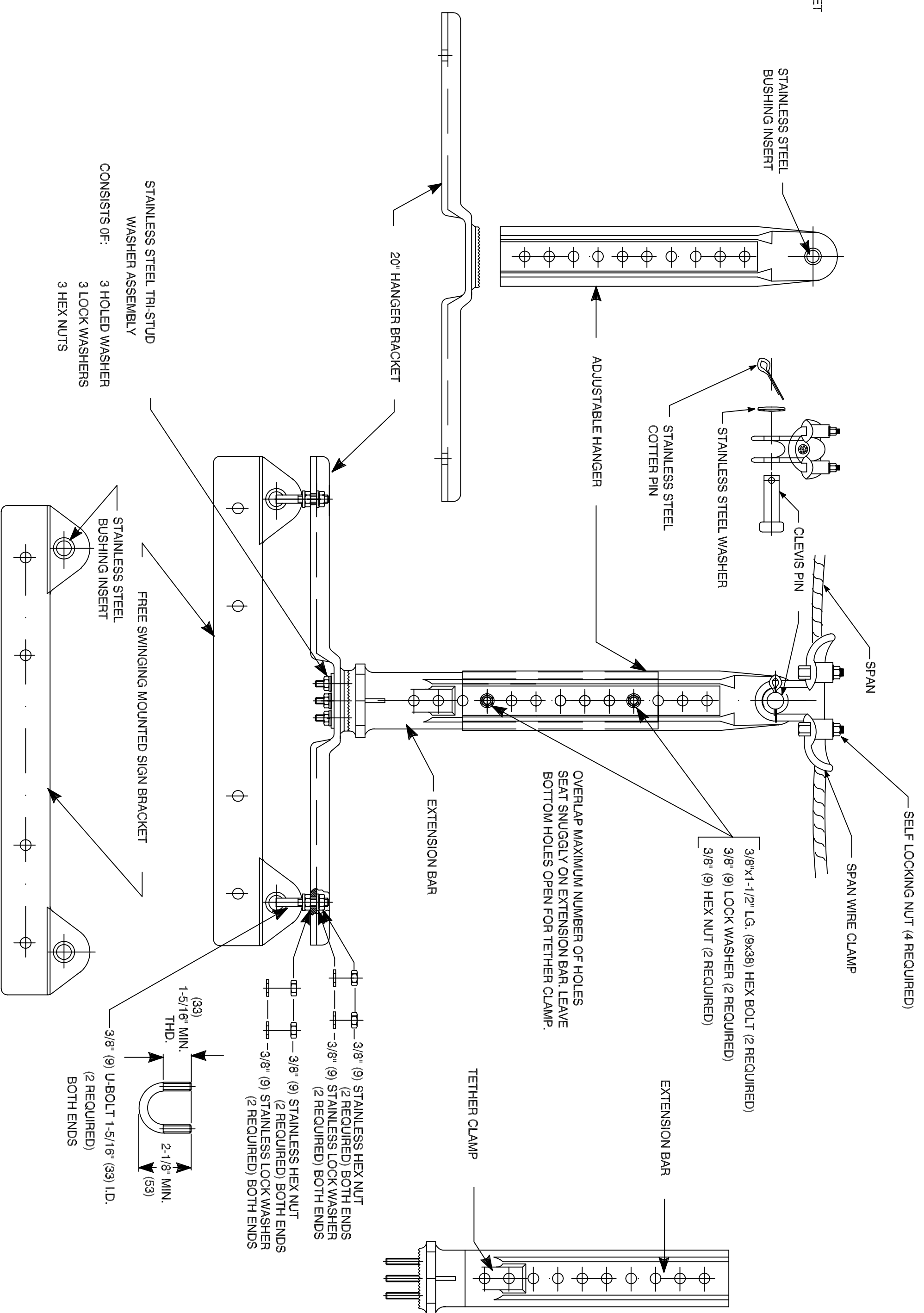
TWO BOLTS IN COMPRESSION, TWO BOLTS IN TENSION.  
WHEN THERE IS MORE THAN ONE ARM ATTACHMENT, THE RESULTANT VECTOR MUST BE SQUARE TO THE BOLTS.  
FOUNDATIONS INSTALLED WITH GREATER THAN 9° ERROR OF BOLT CIRCLE AXIS FROM ARM OR RESULTANT ARM ORIENTATION WILL NOT BE ACCEPTED.

Revisions	By	Date	Notice	Sign-Offs	By	Date
			Manual revisions to this drawing are prohibited. The use of this drawing by any corporation, or by any person for any reason, without written authorized consent of The City of Hartford is prohibited.	Drawn		
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				Recommended		
				Approved		
				Recorded		
Standard Drawing No. ST-4						
Job No.						
Date January 2005						
			<b>City of Hartford, Connecticut</b> Department of Public Works Standard Traffic/Equipment Details Mast Arm Assembly			
						Sheet No. File Name ST-4.DWG

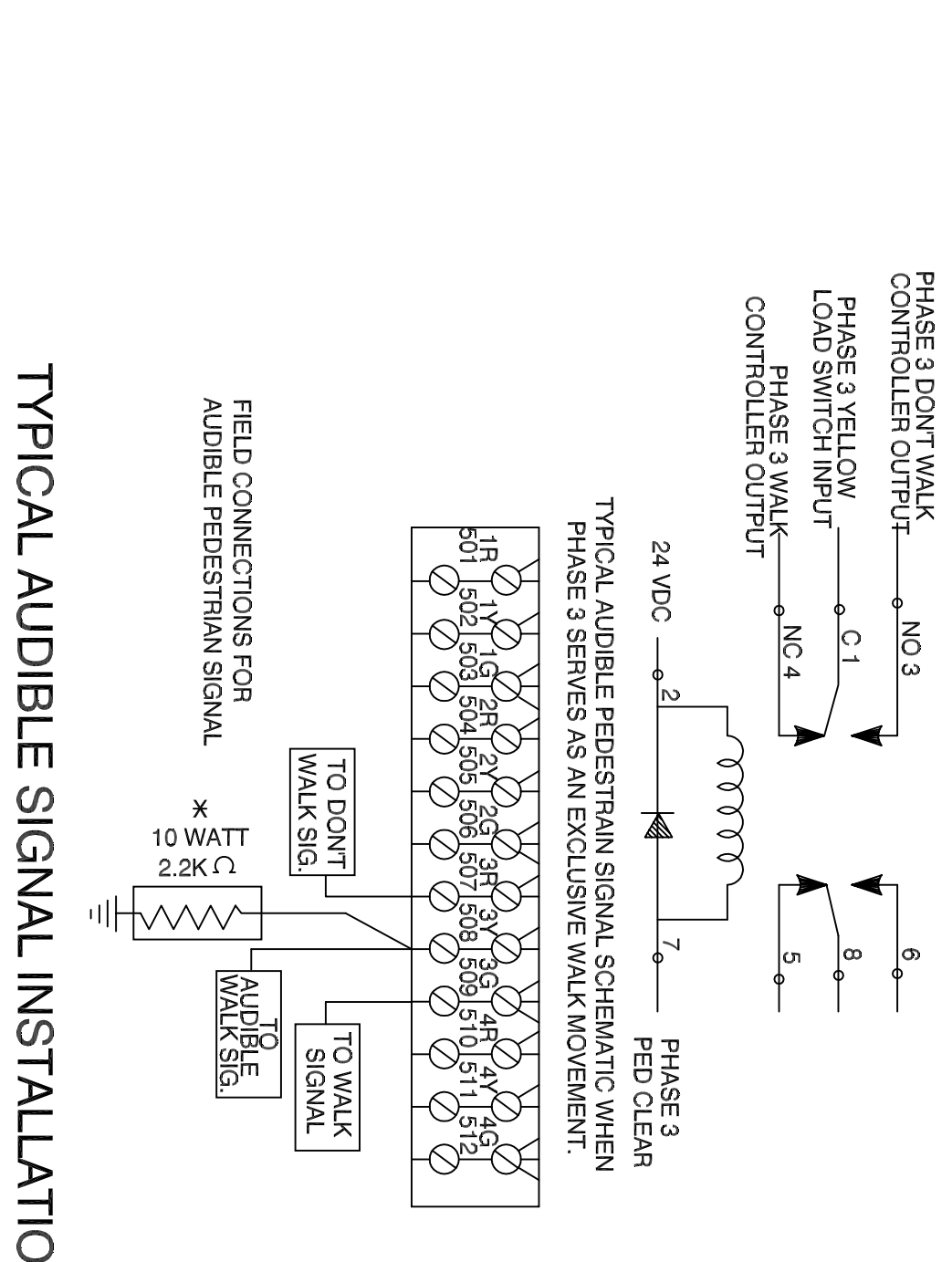
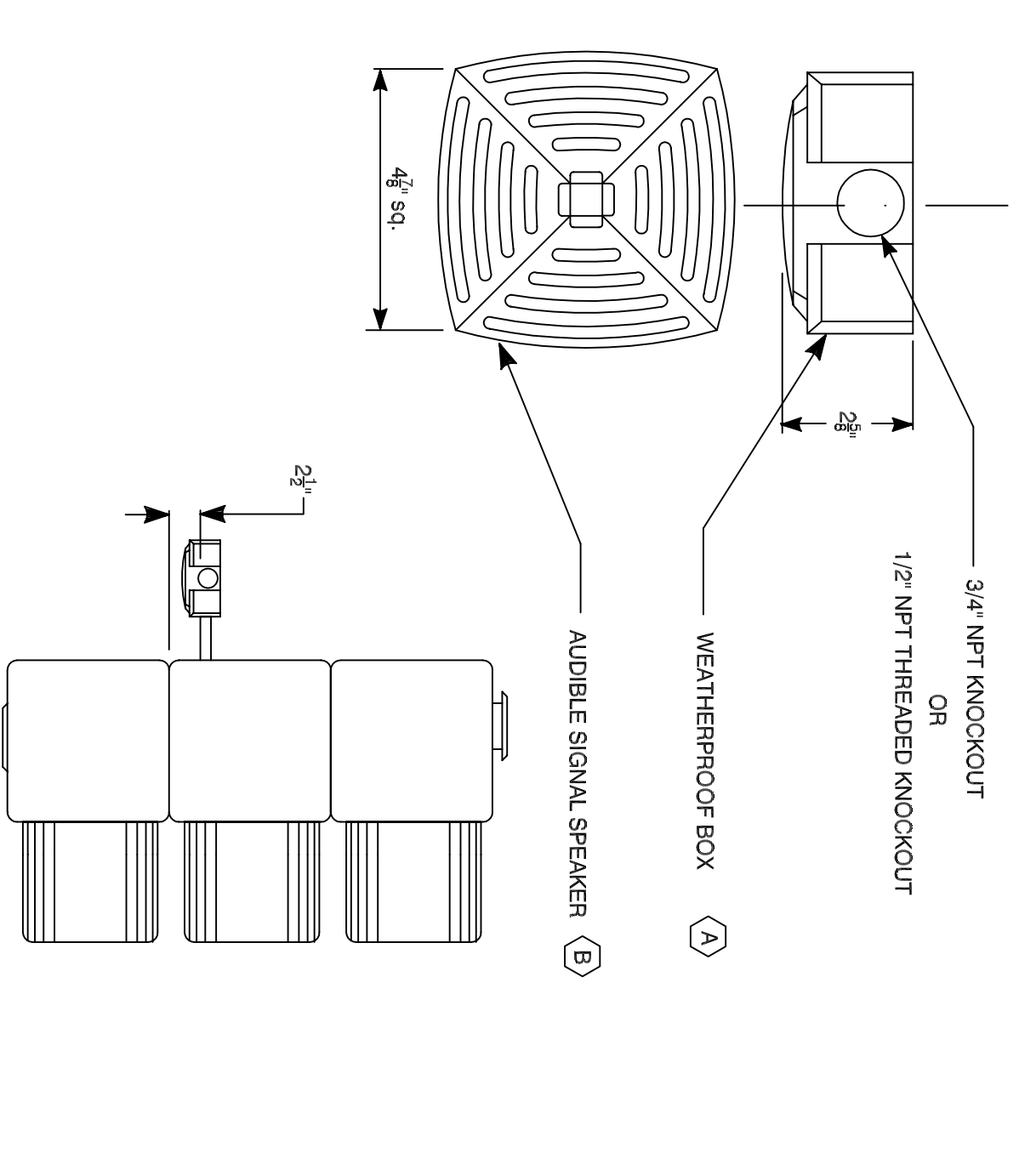
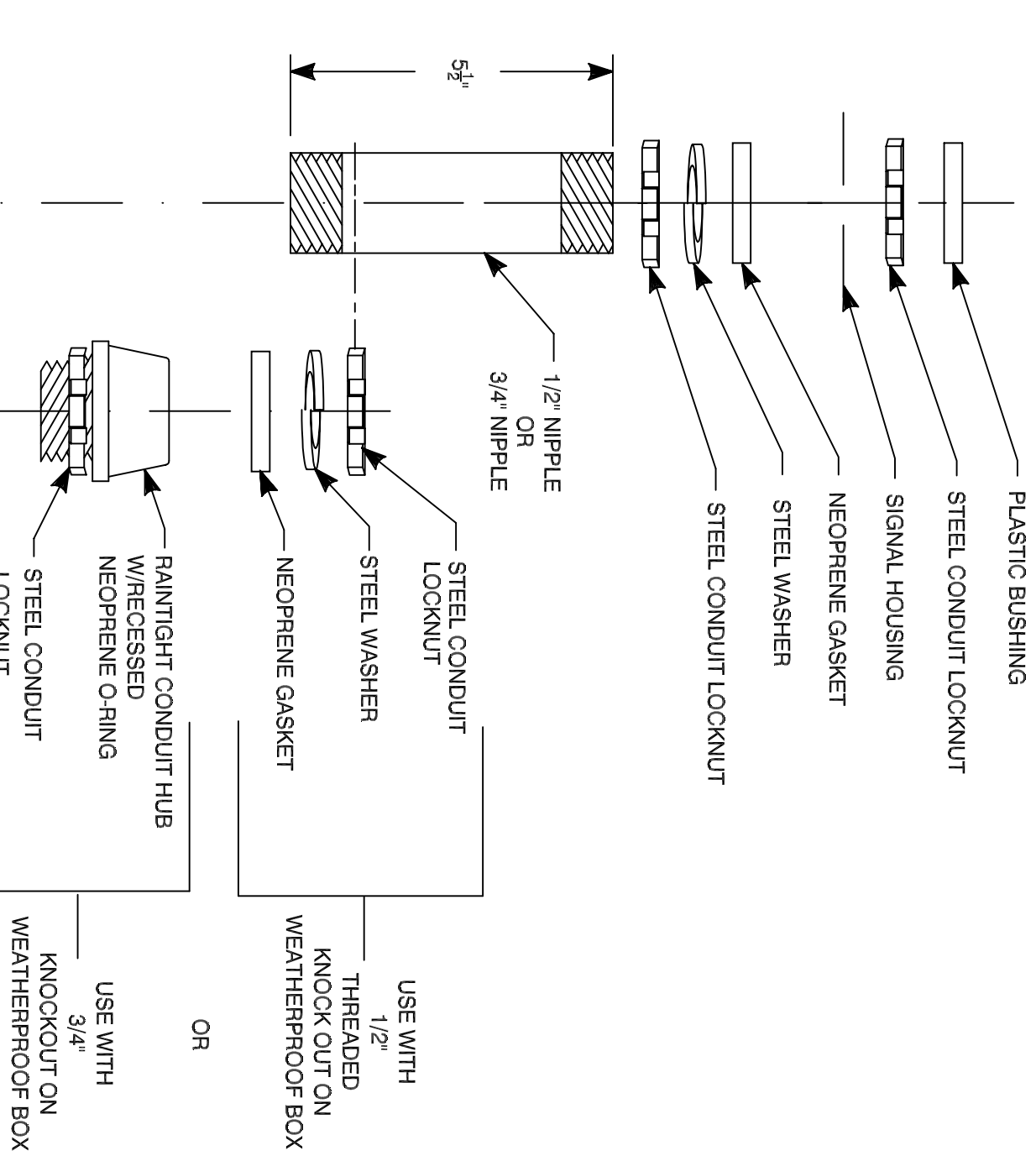
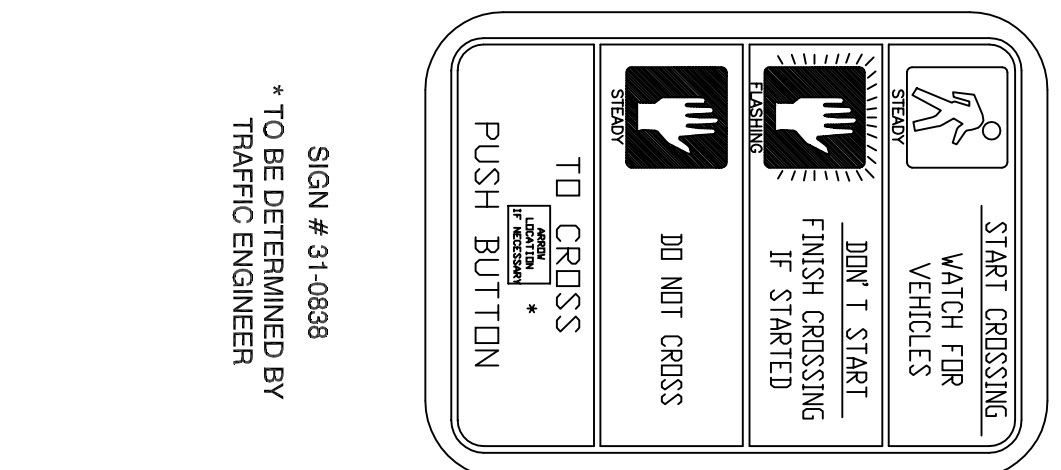


**PEDESTRIAN PUSH BUTTON AND ADVISOR SIGN**

NOTES:  
 9/8" FROM FINISHED GRADE SUCH AS SIDEWALK TO CENTER OF PUSH BUTTON.  
 3/8" FROM SIDEWALK TO BOTTOM OF CONTROLLER.  
 PUSH BUTTON INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), SECTION 14.2.5, CROSSING CONTROLS.  
 GROUT ALL BASES AFTER MOUNTING ON FOUNDATIONS, WHERE NECESSARY.  
 INSTALL PEDESTALS AND POLES SO THAT DOORS AND COVERS ARE ON THE SIDE AWAY FROM THE STREET, UNLESS OTHERWISE SPECIFIED.  
 INSTALL CABINET SO THAT DOOR OPENS FIELD SIDE UNLESS OTHERWISE NOTED ON PLANS.  
 CAULK SEAM BETWEEN SUB BASE AND FOUNDATION.  
 STAINLESS STEEL INTERSECTION #1, USING BLACK PAINT, ON SIDE, FRONT OR BACK OF CABINET.  
 4/4" PEDESTAL TO INCLUDE ALLOY CAP SECURED WITH STAINLESS STEEL SET SCREW.



**FREE SWINGING SPAN MOUNTED SIGN HANGER ASSEMBLY**



**TYPICAL AUDIBLE SIGNAL INSTALLATION**

NOTE:  
 MOUNT AUDIBLE PEDESTRIAN SIGNAL TO SIDE, OR BACK OF CENTRAL SIGNAL ASSEMBLY, FACING DOWN TOWARD PAVEMENT.  
 \* INSTALL DUMMY LOAD.  
 A CONFORM TO SPECIFICATIONS OF FEDERAL SIGNAL CORP., MODEL W8 OR APPROVED EQUAL.  
 B CONFORM TO SPECIFICATIONS OF FEDERAL SIGNAL CORP., MODEL NO. 50G120 WITH TONE MODULE T1M6 OR APPROVED EQUAL.

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Standard Drawing No. ST-5

Job No.

Date January 2005

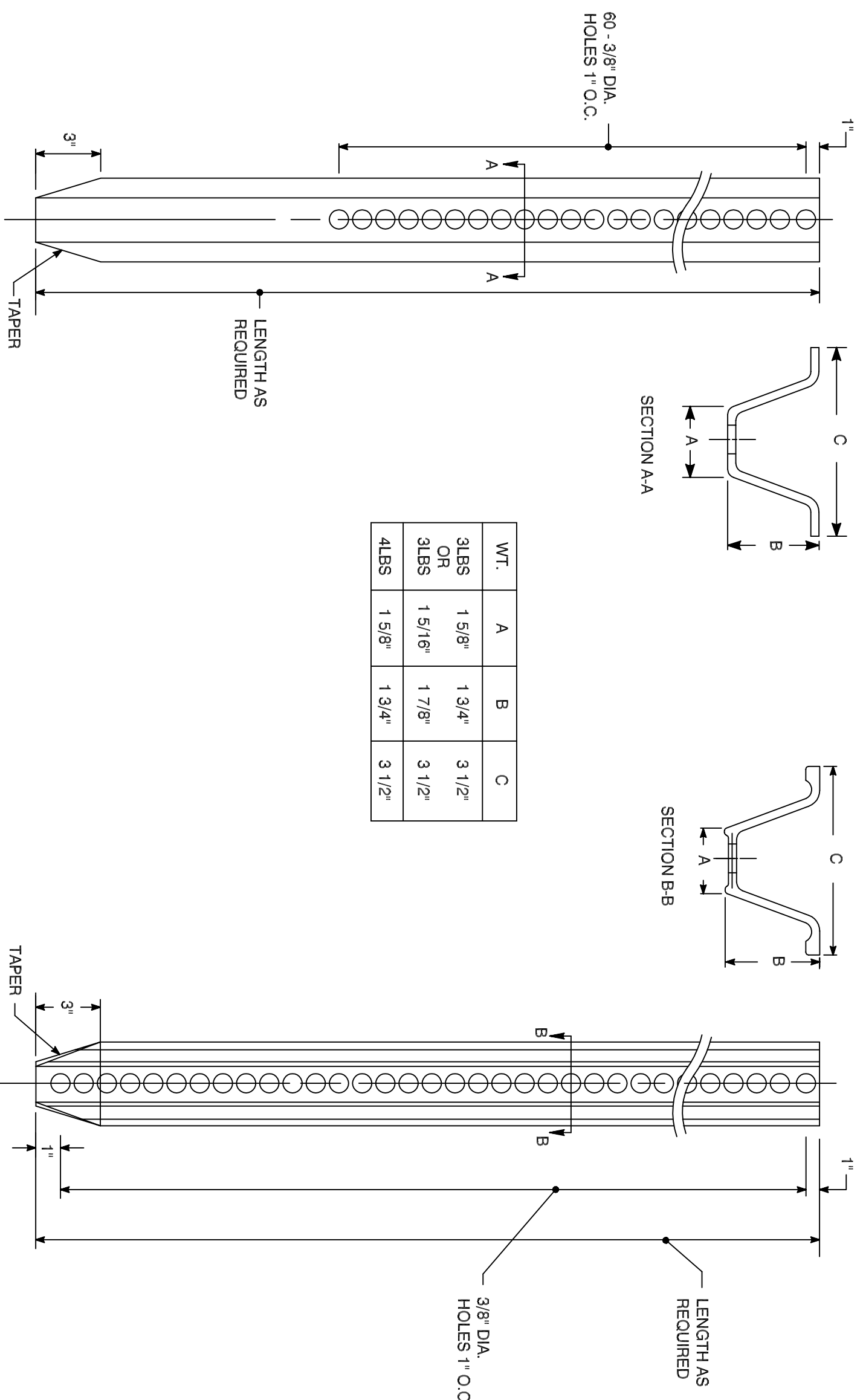


**City of Hartford, Connecticut**  
 Department of Public Works  
 Standard Traffic/Equipment Details  
 Miscellaneous Signal Installation



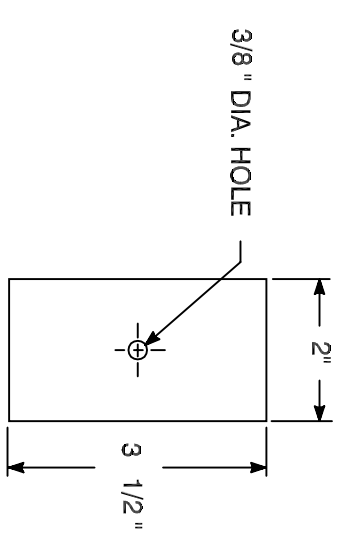
Sheet No. **ST-5**  
 File Name ST-5.DWG

WT.	A	B	C
3LBS	1 5/8"	1 3/4"	3 1/2"
3LBS	1 5/16"	1 7/8"	3 1/2"
4LBS	1 5/8"	1 3/4"	3 1/2"

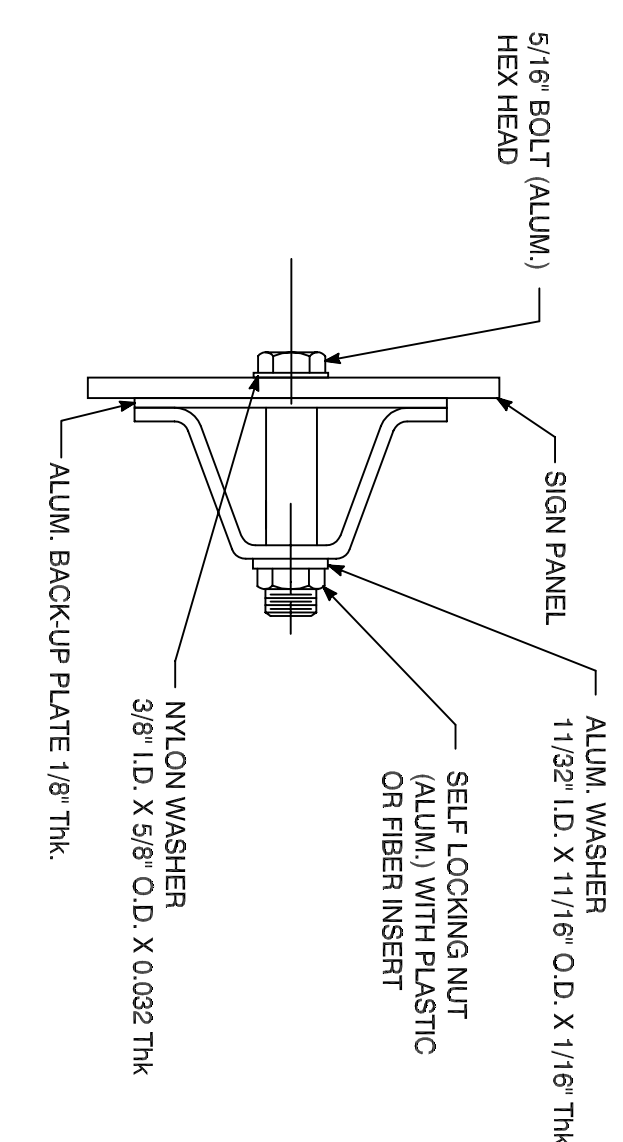


### TYPICAL METAL SIGN POSTS

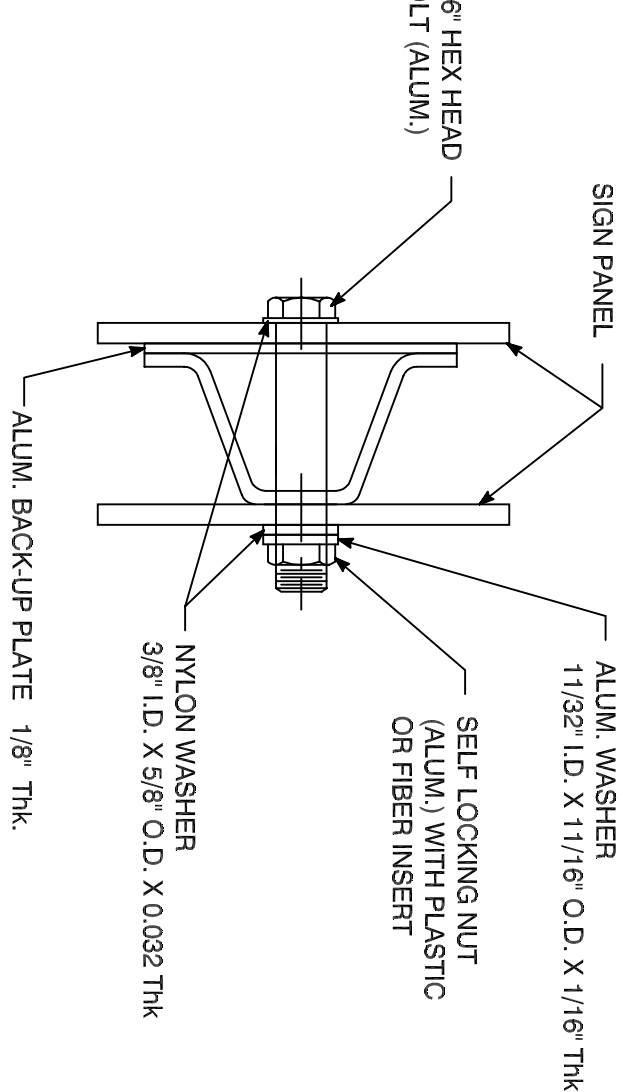
- NOTES:
1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A499-91 GRADE 80 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A-178 CARBON STEEL. AFTER FABRICATION, ALL STEEL SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A123.
  2. AFTER FABRICATION, ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A123.
  3. ALL SIGN POSTS SHALL HAVE "BREAKAWAY" FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL S-1895. THE "BREAKAWAY" FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS. ALL SIGN POST INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
  4. TYPE A POSTS - 3 LB/FT TYPE B POSTS - 4 LB/FT.



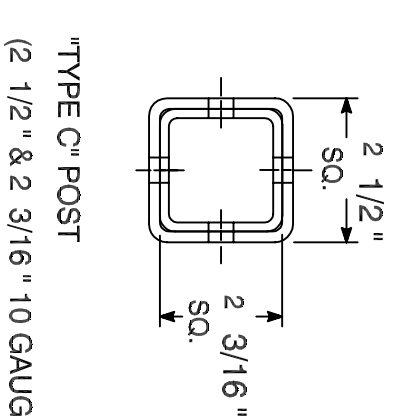
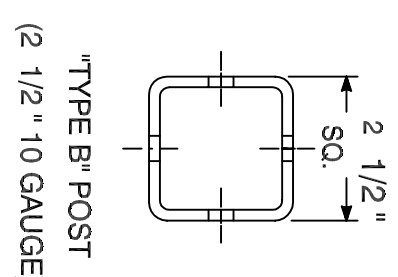
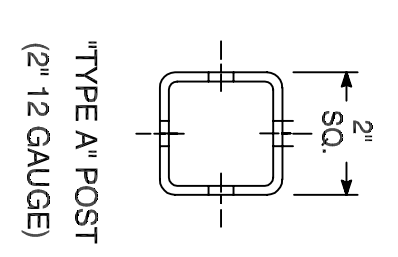
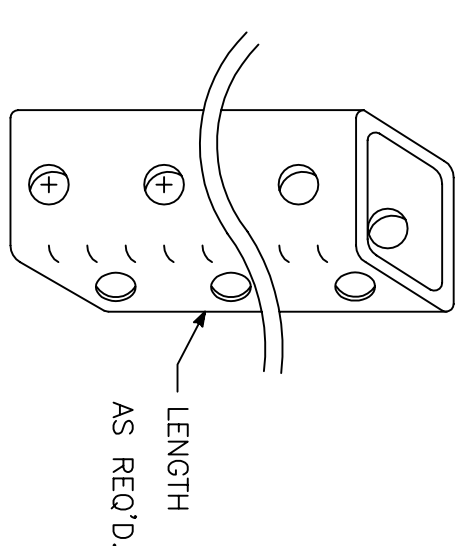
TYPICAL BACK-UP PLATE



TYPICAL SIGN PANEL ATTACHMENT



TYPICAL BACK TO BACK SIGN PANEL ATTACHMENT



### SQUARE TUBULAR SIGN POST

- NOTES:
1. SQUARE TUBULAR SIGN POSTS SHALL BE FORMED OF 10 GAUGE (138 USS GAUGE) OR 12 GAUGE (105 USS GAUGE) HOT ROLLED CARBON STEEL, STRUCTURAL QUALITY, ASTM DESIGNATION A570, GRADE 50, AVERAGE MINIMUM YIELD STRENGTH AFTER COLD FORMING IS 60,000 PSI.
  2. SQUARE TUBULAR SIGN POSTS SHALL BE ROLLED TO SIZE & CORNER WELDED BY HIGH FREQUENCY RESISTANCE WELDING AND EXTERNALLY SCARPED TO AGREE WITH CORNER RADIUS.
  3. SQUARE TUBULAR SIGN POSTS SHALL BE HOT DIPPED GALVANIZED CONFORMING TO ASTM A 653, G90, STRUCTURAL QUALITY, GRADE 50, CLASS 1, THE CORNER WELD IS ZINC COATED AFTER SCARPING OPERATION, THE STEEL IS ALSO COATED WITH A CHROMATE CONVERSION COATING AND A CLEAN ORGANIC POLYMER TOPCOAT, BOTH THE INTERIOR AND THE EXTERIOR OF THE SIGN POST SHALL BE GALVANIZED.
  4. FINISHED SQUARE TUBULAR SIGN POSTS SHALL BE SMOOTH AND STRAIGHT TO PROVIDE THE TELESCOPE OF CONSECUTIVE SIZES OF SQUARE POST FREELY AND FOR NOT LESS 10 FEET OF THEIR LENGTH.
  5. HOLES SHALL BE 7/16" DIA. ON 1" CENTERS ON ALL SIDES FOR ENTIRE LENGTH OF THE POST.
  6. TYPE C SIGN POSTS FORMED OF 2 3/16" SQUARE TUBULAR SIGN POSTS TELESCOPED INSIDE 2 1/2" SQUARE TUBULAR SIGN POSTS. 2 3/16" SQUARE TUBULAR SIGN POSTS TO BE TELESCOPED AT LEAST ONE HALF THE LENGTH OF THE SIGN POST ASSEMBLY.

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Standard Drawing No. ST-6  
Job No.  
Date January 2005

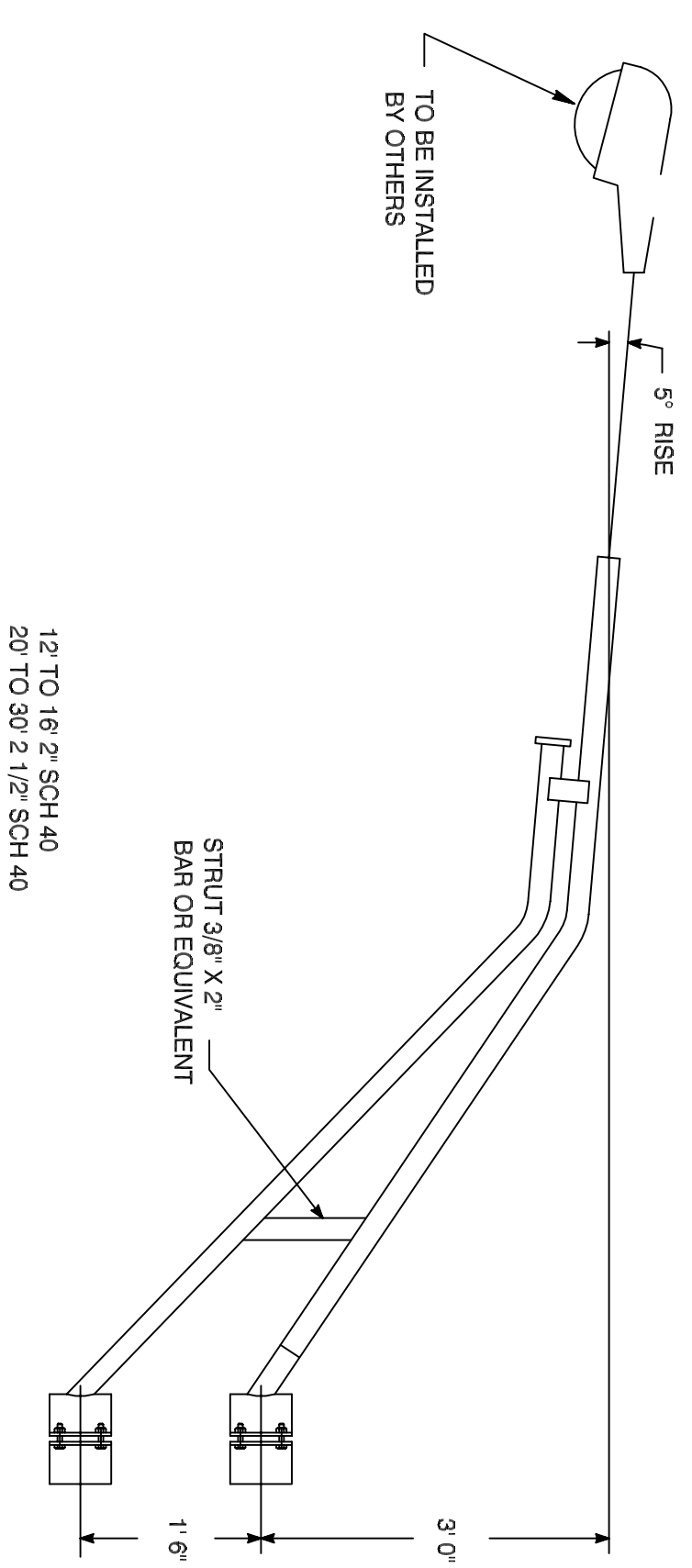


City of Hartford, Connecticut  
Department of Public Works  
Standard Traffic/Equipment Details  
Typical Metal Sign-Posts



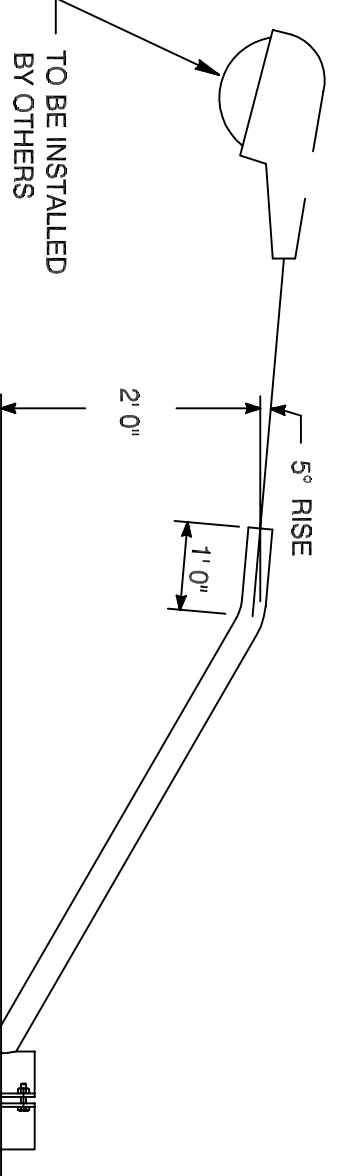
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TYPICAL TRUSS LUMINAIRE ARM

12" TO 16 2" SCH 40  
20" TO 30" 2 1/2" SCH 40



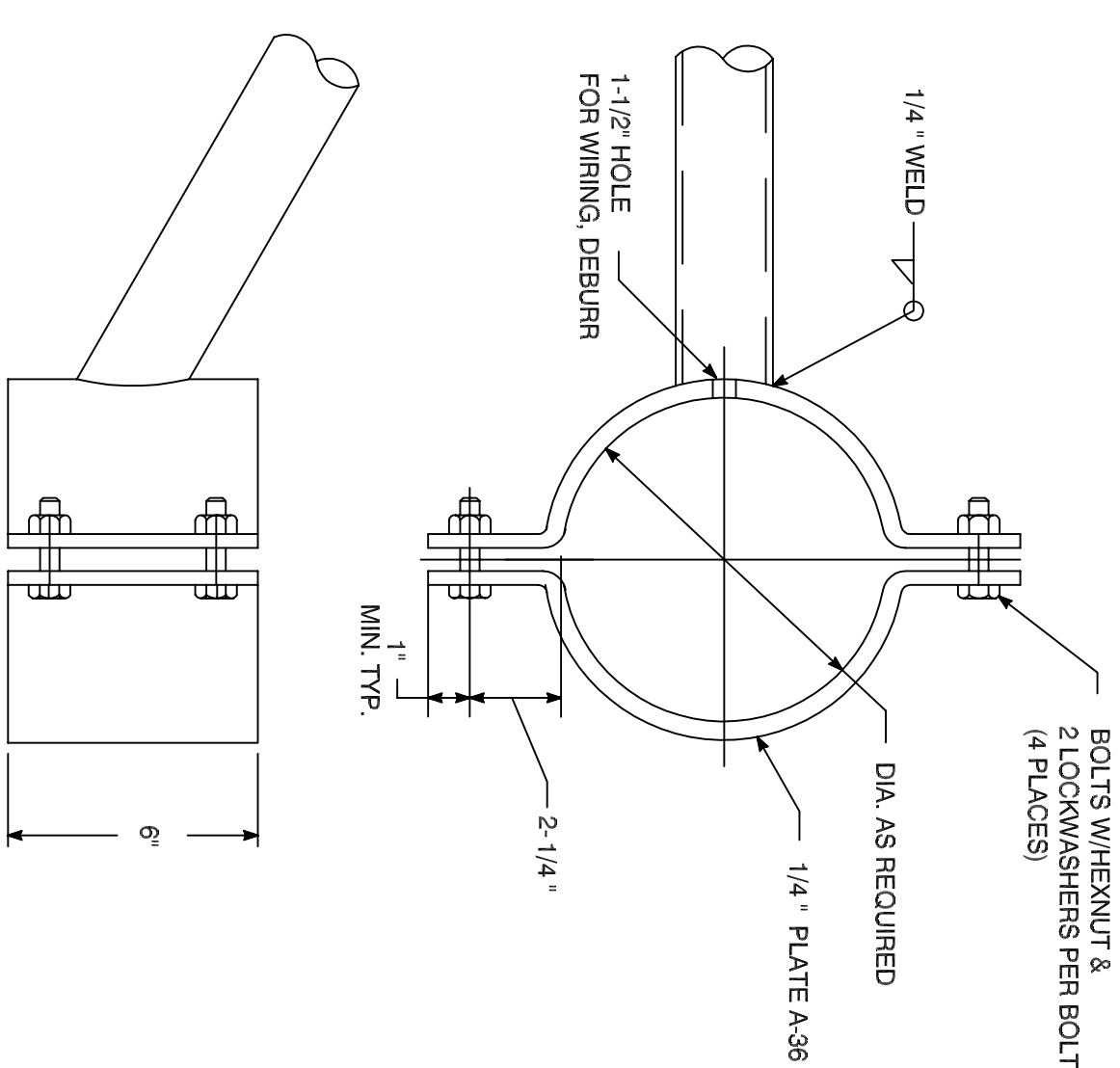
TYPICAL SINGLE LUMINAIRE ARM

4" to 10 2" SCH 40

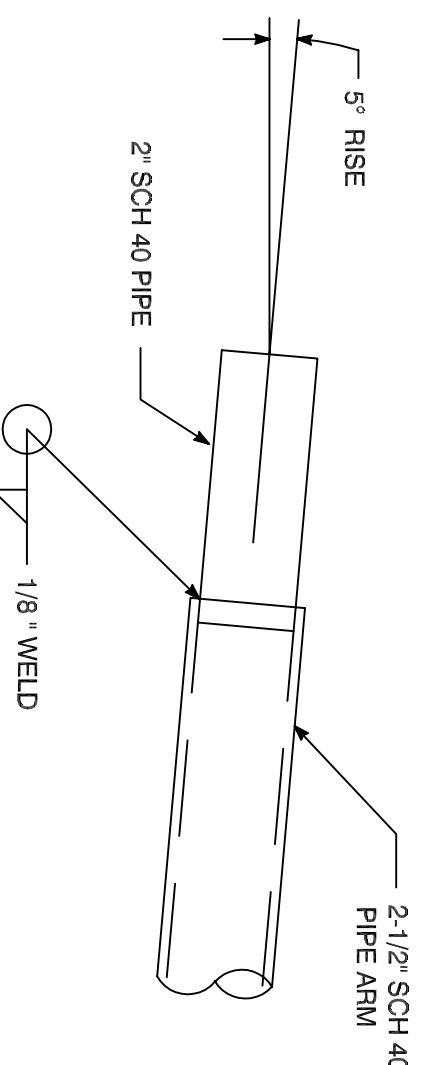
ARM CLAMP DETAIL MATERIAL SPECS  
CLAMP PLATE ASTM A36  
BOLTS & NUTS ASTM A325  
PIPE ASTM A36  
BAR ASTM A36

SHAFT SIZE				
LENGTH	LOAD AT YIELD *	STRINGING TENSION	MAXIMUM DEFLECTION AT STRINGING TENSION	BOLT CIRCLE
26'	6100 lbs.	2440 lbs.	9.0"	20"
28'	6100 lbs.	2440 lbs.	9.0"	20"
30'	7800 lbs.	3120 lbs.	9.6"	20"
32'	10,000 lbs.	4000 lbs.	10.3"	22"
34'	11,200 lbs.	4480 lbs.	10.9"	22"

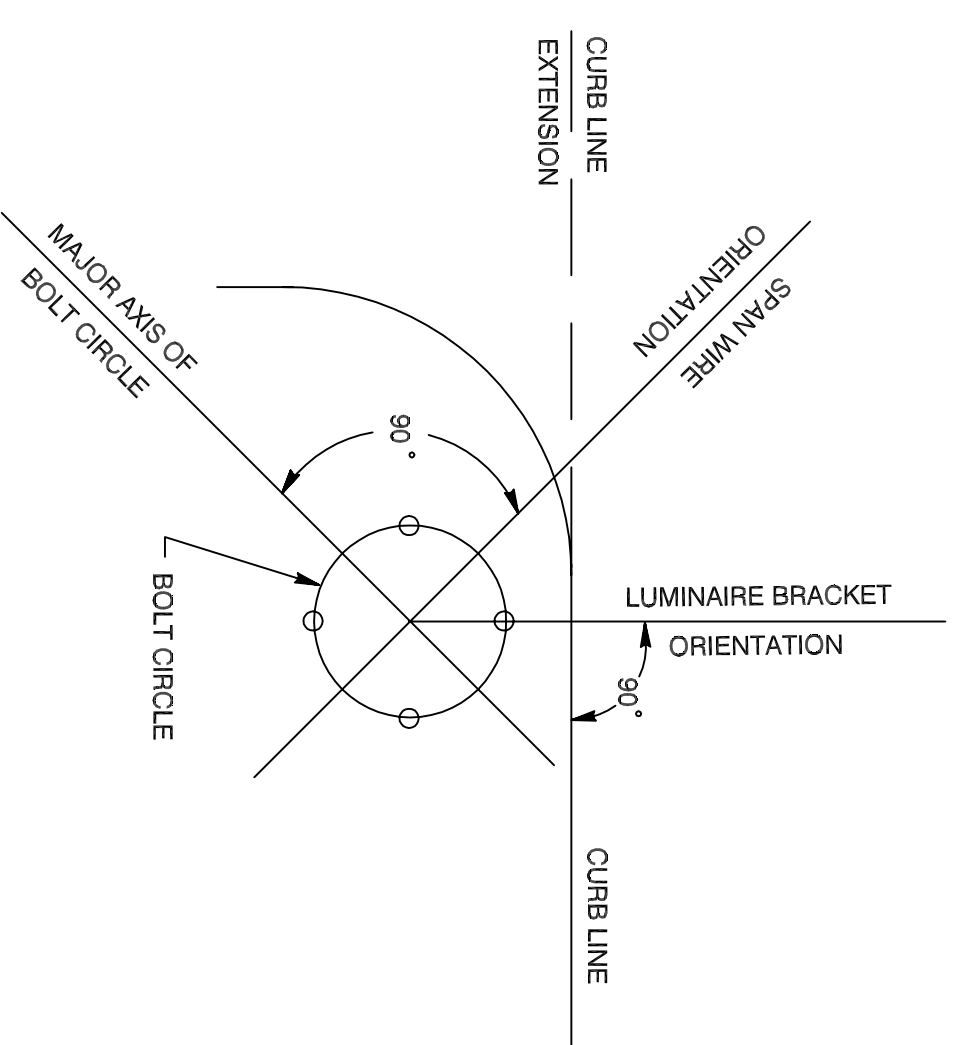
\* 18" FROM TOP OF POLE



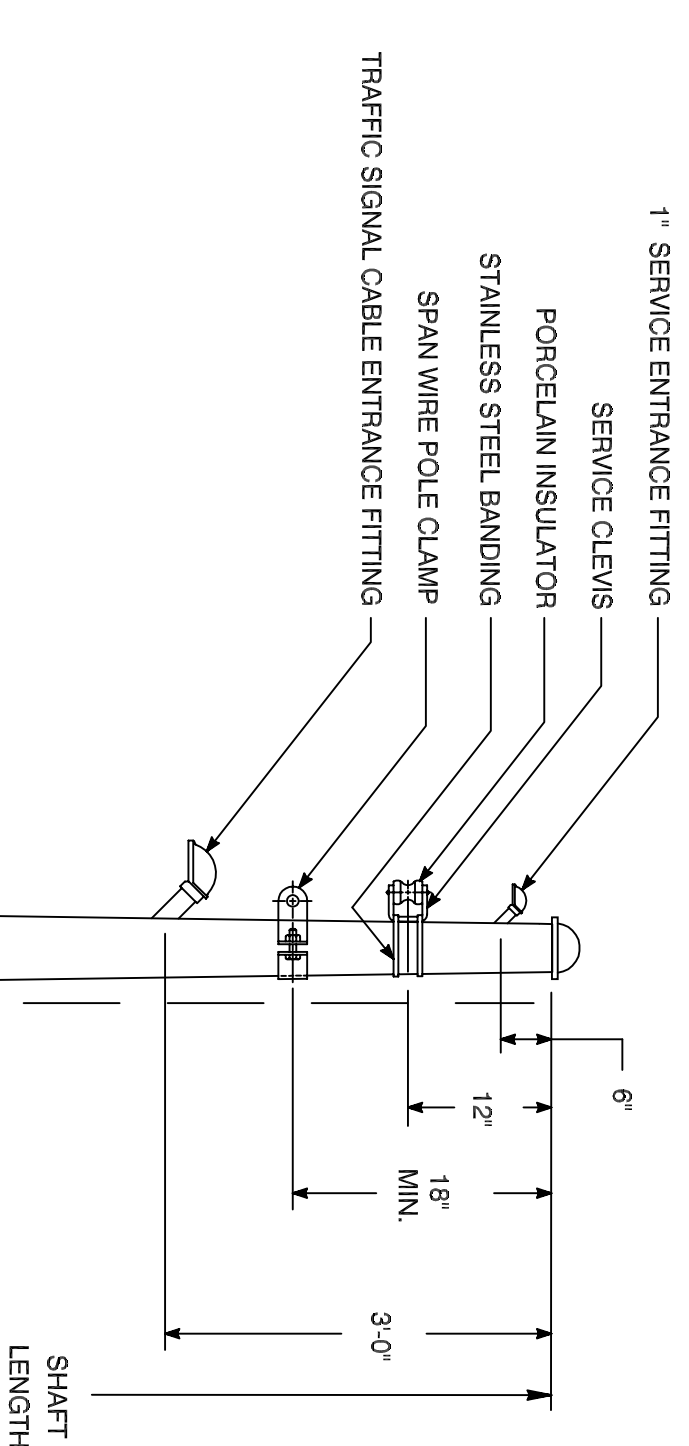
ARM BRACKET DETAIL



REDUCING TENON EXTENSION FOR 2-1/2" ARMS



STEEL SPAN POLE ORIENTATION DETAIL



TYPICAL STEEL SPAN POLE

RAKE UNLOADED SPAN POLE IN ACCORDANCE WITH CONNDOT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION (FORM 814A) SECTION 11.09.09 - CONSTRUCTION METHODS. WHEN THERE IS MORE THAN ONE SPAN ATTACHMENT THE RESULTANT VECTOR MUST BE SQUARE TO THE BOLTS. TWO BOLTS IN COMPRESSION. TWO BOLTS IN TENSION. FOUNDATIONS INSTALLED WITH GREATER THAN 6" ERROR OF BOLT CIRCLE AXIS FROM SPAN WIRE ORIENTATION, WILL NOT BE ACCEPTED.

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Standard Drawing No. ST-7

Job No.

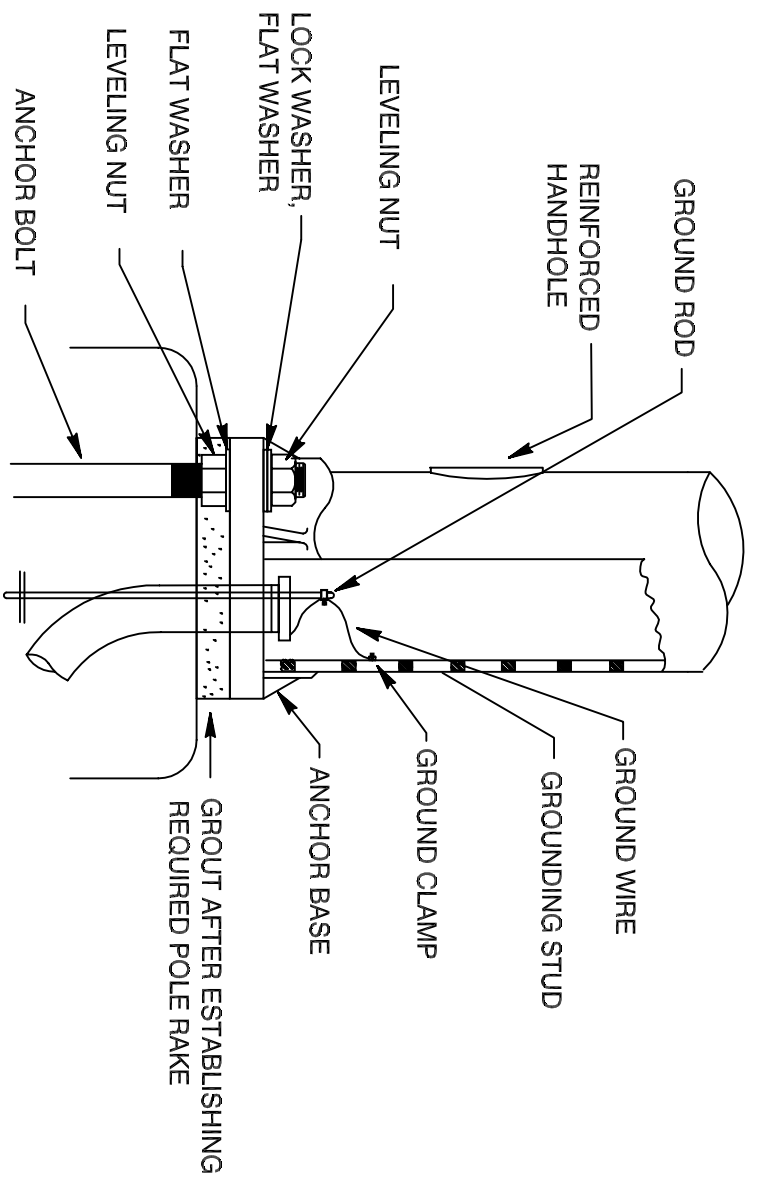
Date January 2005



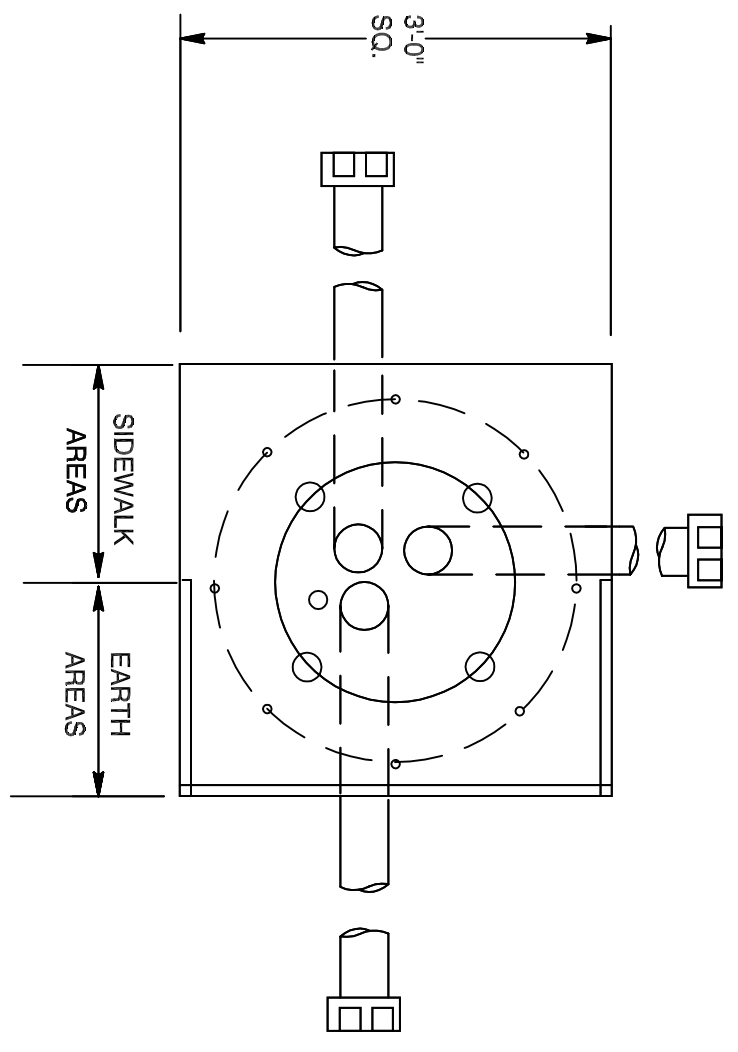
City of Hartford, Connecticut  
Department of Public Works  
Standard Traffic/Equipment Details  
Typical Span Poles



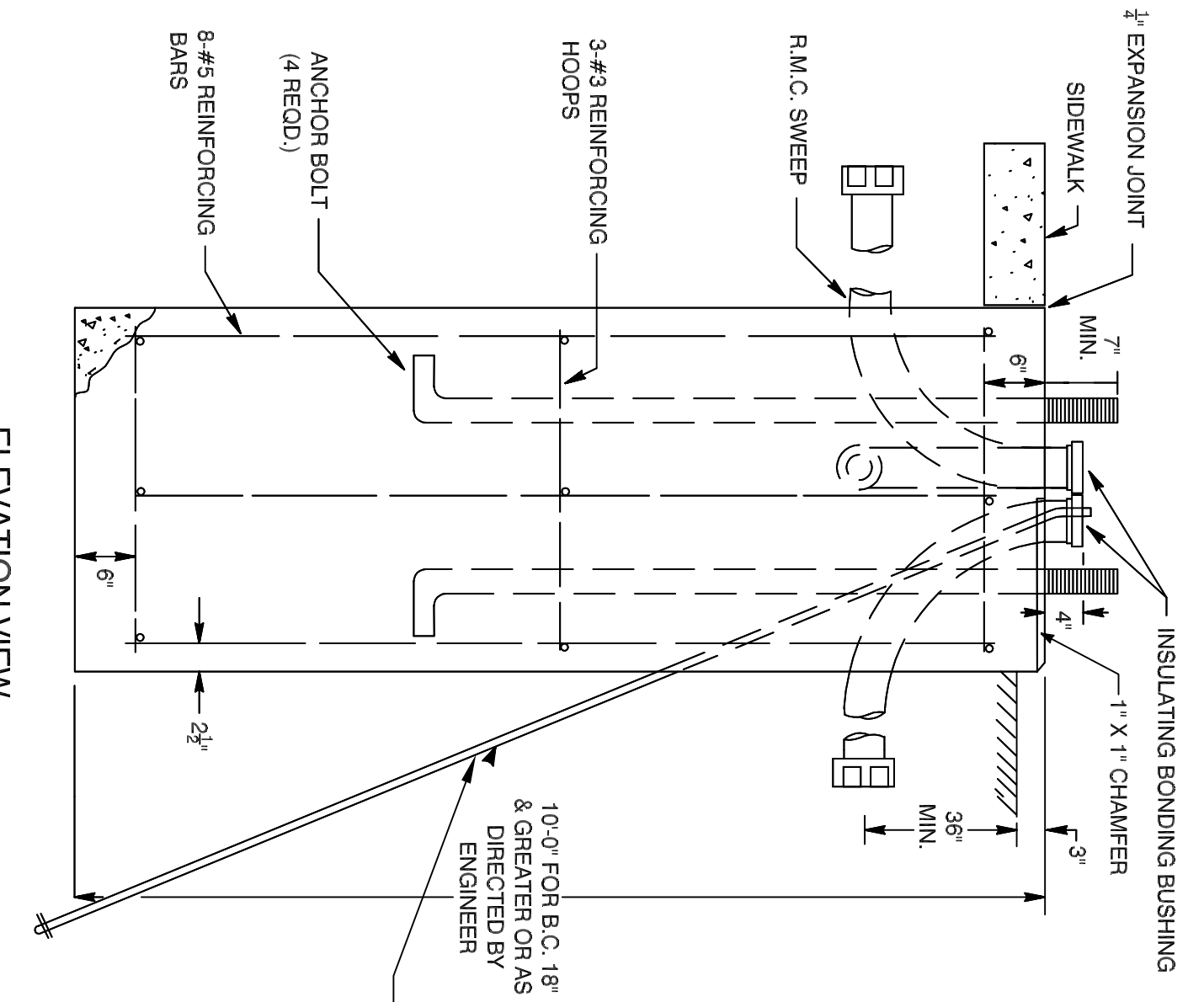
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**STEEL POLE  
INSTALLATION DETAIL**

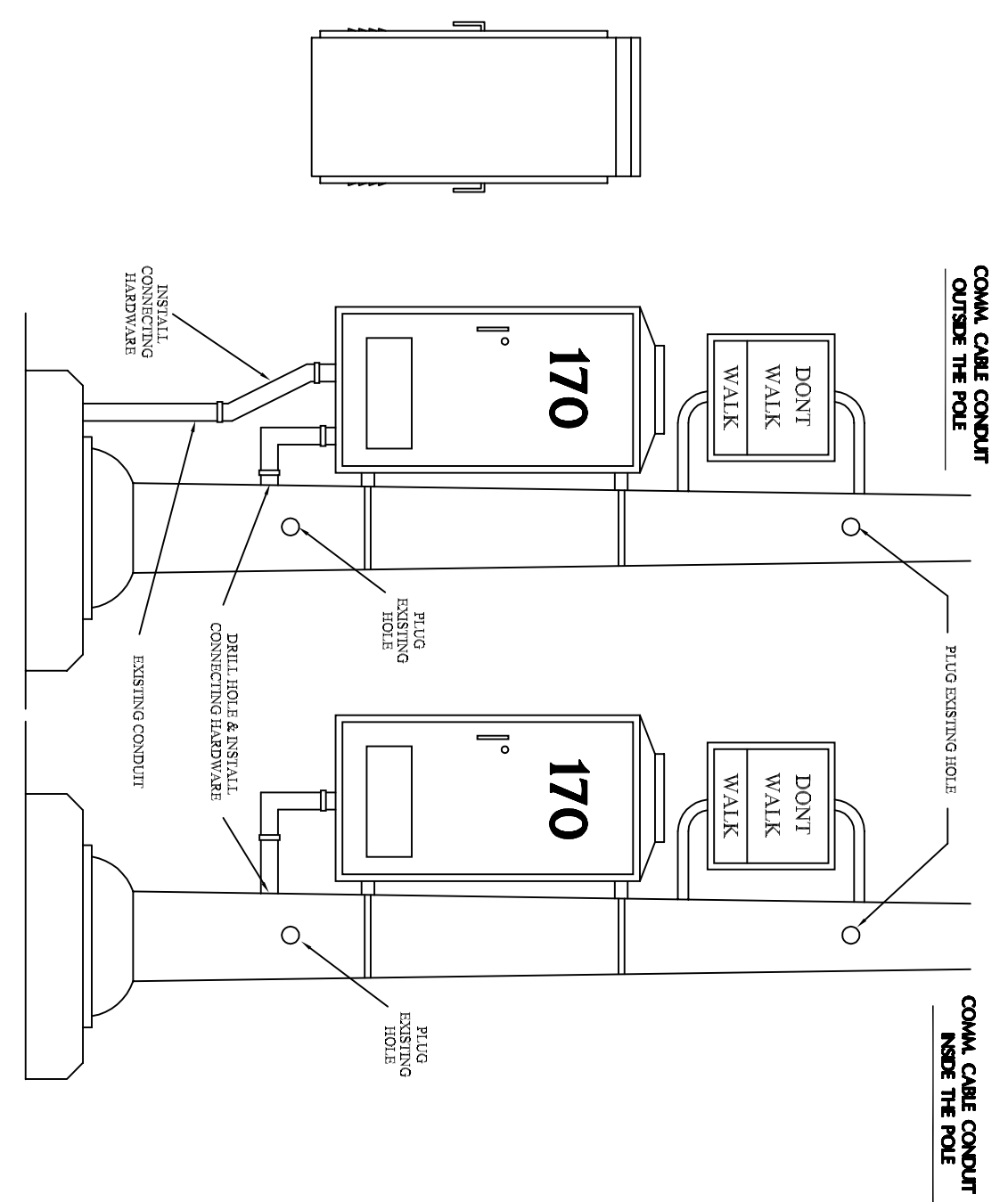


**PLAN VIEW**

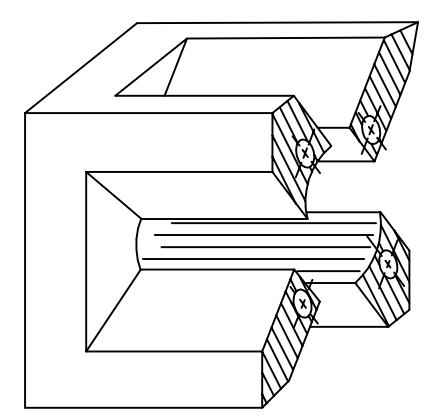


**ELEVATION VIEW**

**TRAFFIC CONTROL FOUNDATION  
SPAN POLE**



**TYPICAL DETAIL OF POLE MOUNTED  
170 TYPE TRAFFIC CONTROLLER**



**PICTORIAL SECTION A-A**

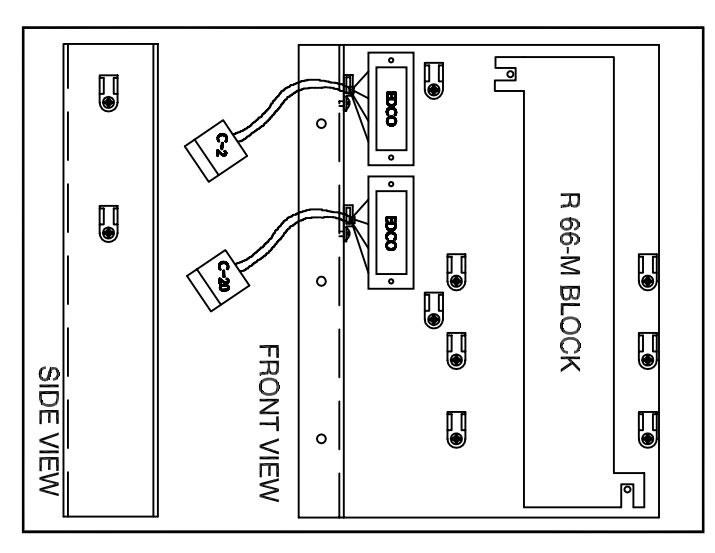
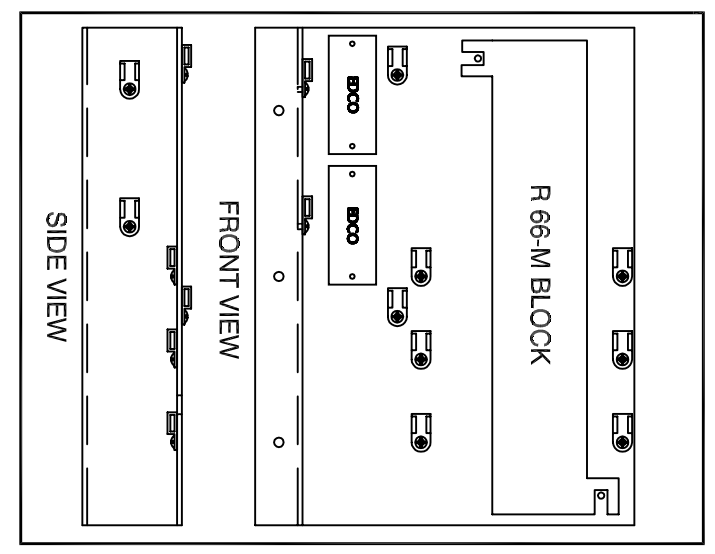
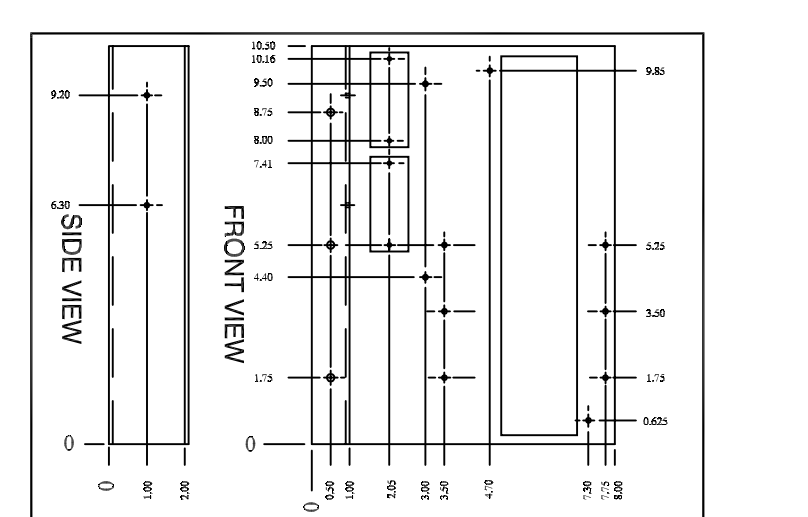
3/4 X 1/8 MIN. ANCHOR BOLTS HOT DIP GALVANIZED FOR ITS ENTIRE LENGTH AFTER THREADING. GALVANIZED FLAT WASHERS AND NUTS TO BE SUPPLIED WITH PEDESTAL BASE.

**PRECAST PEDESTAL BASE**

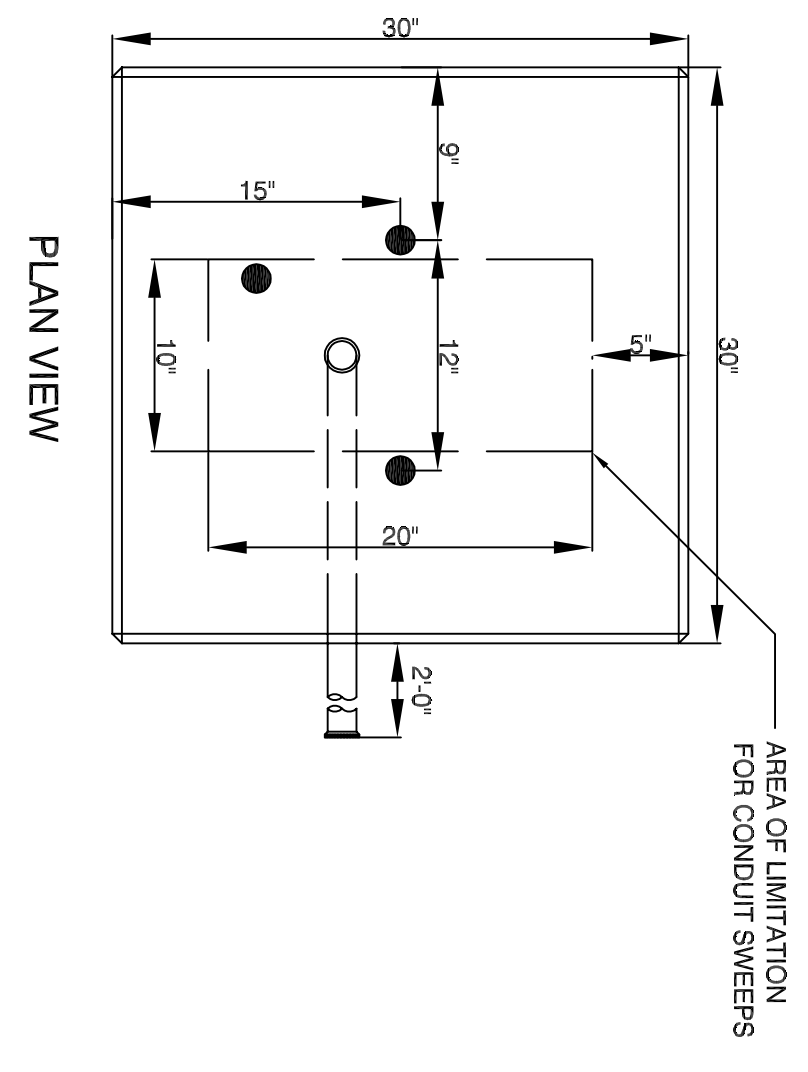
**NOTES:**  
PLACE NO. 6 CRUSHED STONE IN CENTER OPENING AFTER CONDUITS AND GROUND ROD HAVE BEEN INSTALLED.

**NOTES:**  
INSTALL A MINIMUM OF TWO R.M.C SWEEPS IN ALL FOUNDATIONS.  
INSTALL A MINIMUM OF ONE SPARE 2" R.M.C SWEEP IN ALL FOUNDATIONS.  
EXTEND SPARE SWEEP MINIMUM 24" FROM SIDE.  
FORM EXPOSED EDGES WITH 1" X 1" CHAMFER.  
MATCH TOP OF SPAN POLE AND PEDESTAL FOUNDATION WITH CROSS SLOPE OF ADJACENT SIDEWALK.  
FINISH EXPOSED AREAS WITH WOOD FLOAT AND BRUSH.  
BOND ALL POLES, PEDESTALS, AND CONDUITS TO GROUND ROD.  
ORIENT SPAN POLE ANCHOR BOLTS WITH RESPECT TO LOAD AS SHOWN ON TYPICAL SPAN POLE SHEET.  
ANCHOR BOLT LENGTH INCLUDES BEND.

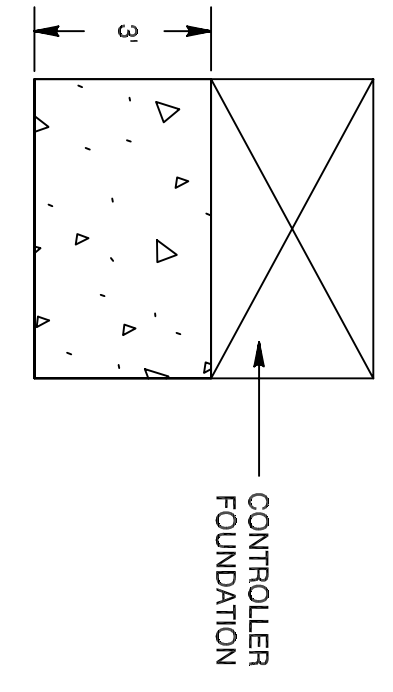
WHERE AN EXISTING CONCRETE SIDEWALK SLAB ABUTTING A FOUNDATION OR HANDHOLE IS DAMAGED OR CUT DURING INSTALLATION THE ENTIRE SECTION SHALL BE REPLACED.  
A CLEAR PATH NOT LESS THAN 3' SHALL BE PROVIDED IN SIDEWALK AREAS FOR HANDICAP ACCESS.



**COMMUNICATION PANEL LAYOUT**

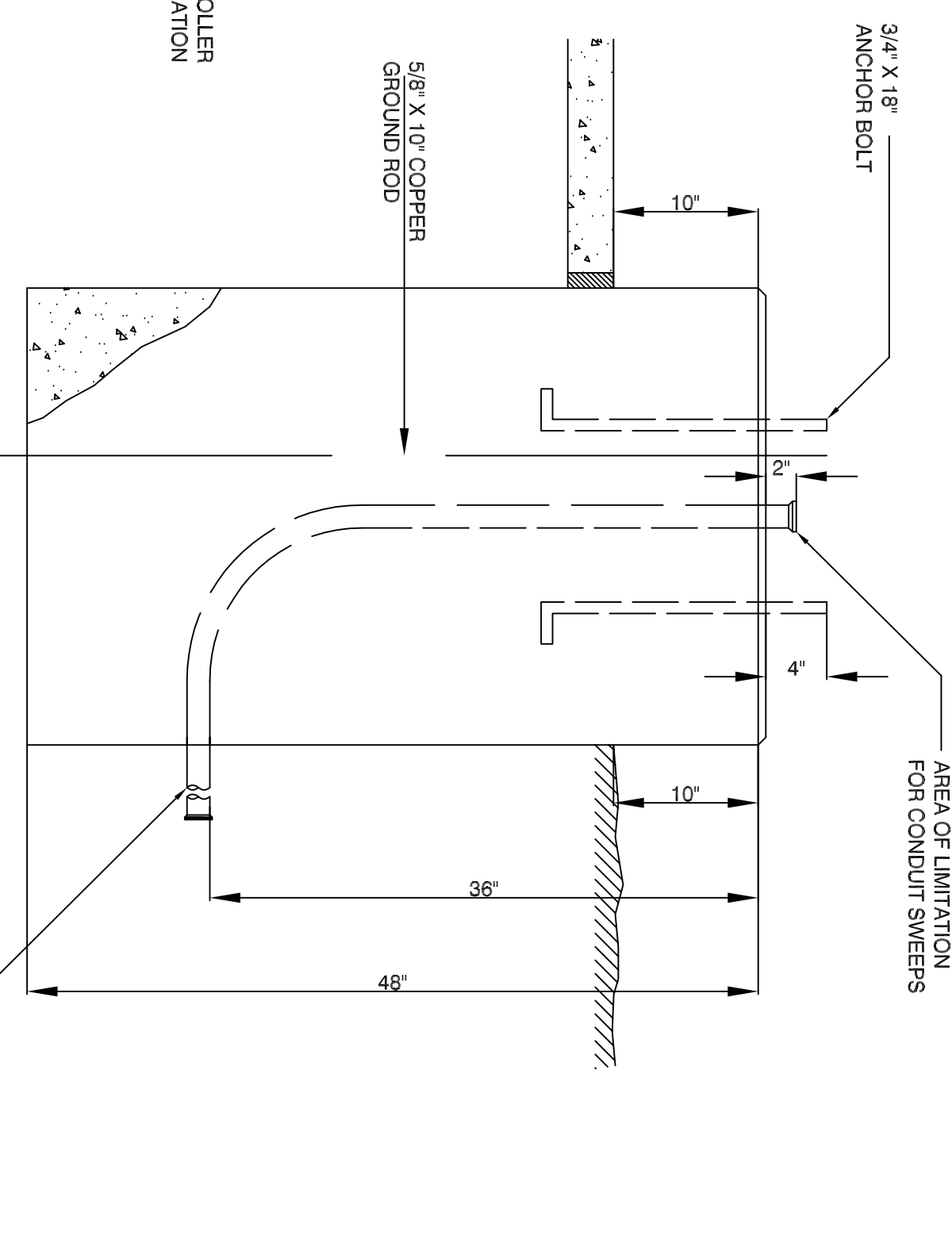


**PLAN VIEW**



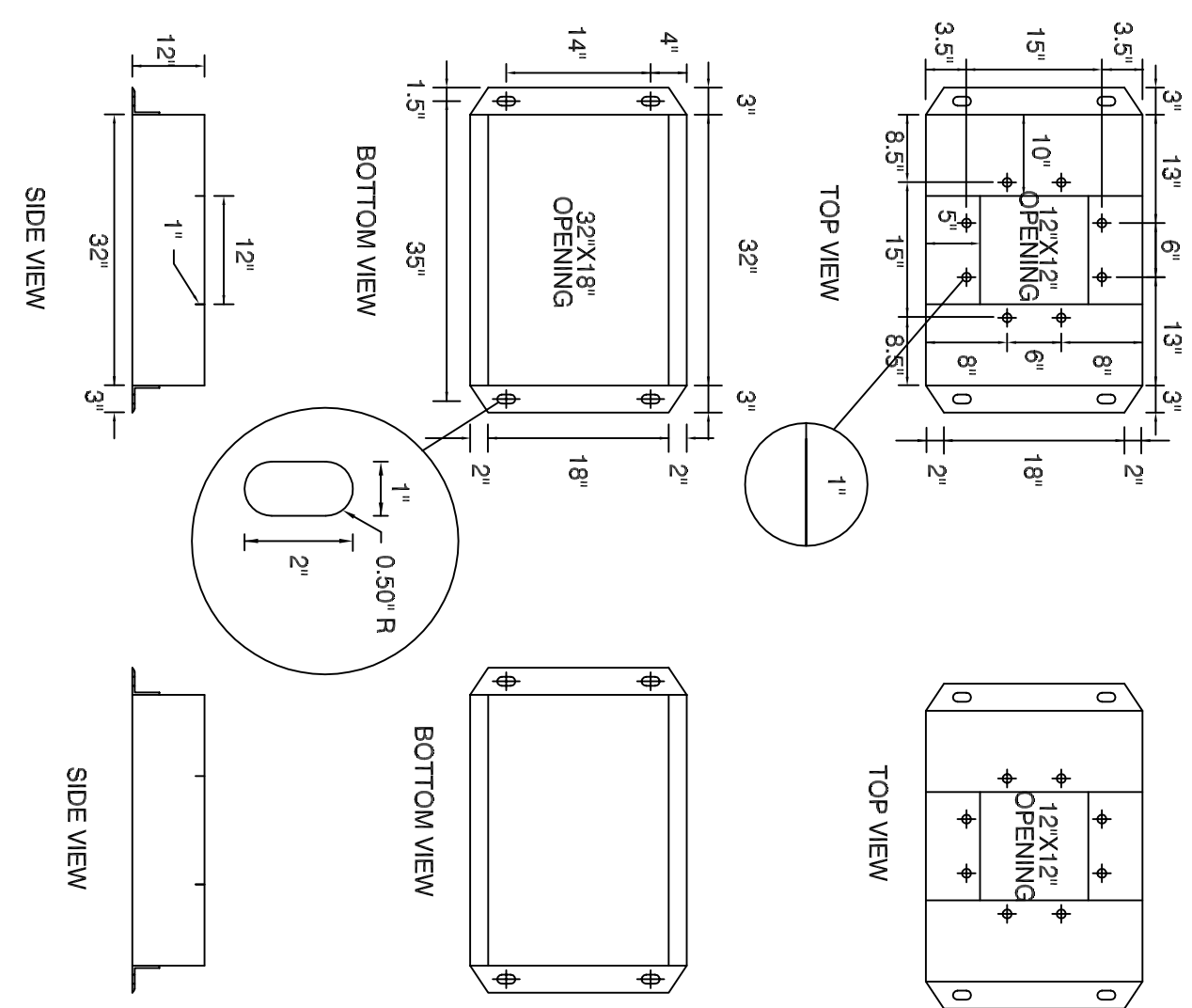
**TYPICAL CONCRETE SIDEWALK  
AT CONTROLLER FOUNDATION**

**NOTES:**  
INSTALL PRE-CAST OR CAST IN PLACE CONCRETE SIDEWALK ON CABINET DOOR SIDE OF CONTROLLER FOUNDATION.  
MINIMUM 3" THICK SLAB.  
MINIMUM 6" GRAVEL OR MISCELLANEOUS AGGREGATE BASE, COMPACTED.  
PITCH SIDEWALK 1/4" PER FOOT AWAY FROM THE CONTROLLER FOUNDATION.

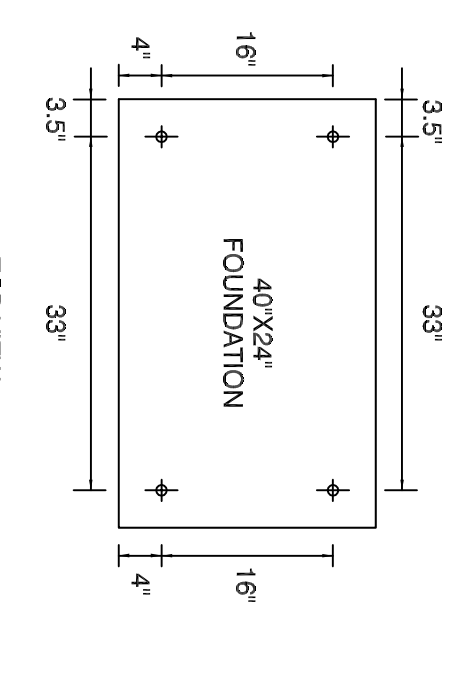


**ELEVATION VIEW**

**TRAFFIC CONTROL FOUNDATION  
170 TYPE**



**170 "M" BASE ADAPTOR**



**NEW ANCHOR BOLTS  
IN EXISTING FOUNDATION**

**NOTE:** CONTRACTOR SHALL USE RAMSET/RED HEAD/EPON EPOXY INJECTION SYSTEM WITH CERAMIC'S FORMULA FOR THE INSTALLATION OF ANCHOR BOLTS.

**NOTES:**  
INSTALL FOUNDATION ON 6" OF COMPACTED BANK RUN GRAVEL LEVEL FOUNDATION WITH A PROJECTION OF 4" ABOVE FINISHED GRADE.  
PLACE NO. 6 CRUSHED STONE IN THE CENTER OPENINGS AFTER THE CONDUITS AND GROUND ROD HAVE BEEN INSTALLED. THE OPENINGS SHALL BE CAPPED WITH A 2" GROUT LEVEL WITH THE TOP OF THE FOUNDATION AND NEATLY FINISHED. THE GROUT SHALL CONFORM WITH THE REQUIREMENTS OF CONDUIT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION (FORM 814A) ARTICLE W.3.01-1.2.

CONCRETE: CLASS "A" CONFORMING TO ARTICLE M.03.01 OF FORM 914A.  
#4 RE BAR 2" MIN. COVER AROUND ALL OPENINGS. 3-#4 RE BARS IN EACH CORNER.  
CONDUITS SHALL NOT PROJECT MORE THAN 2" ABOVE FOUNDATION.

Revisions	By	Date	Notice

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Recorded		

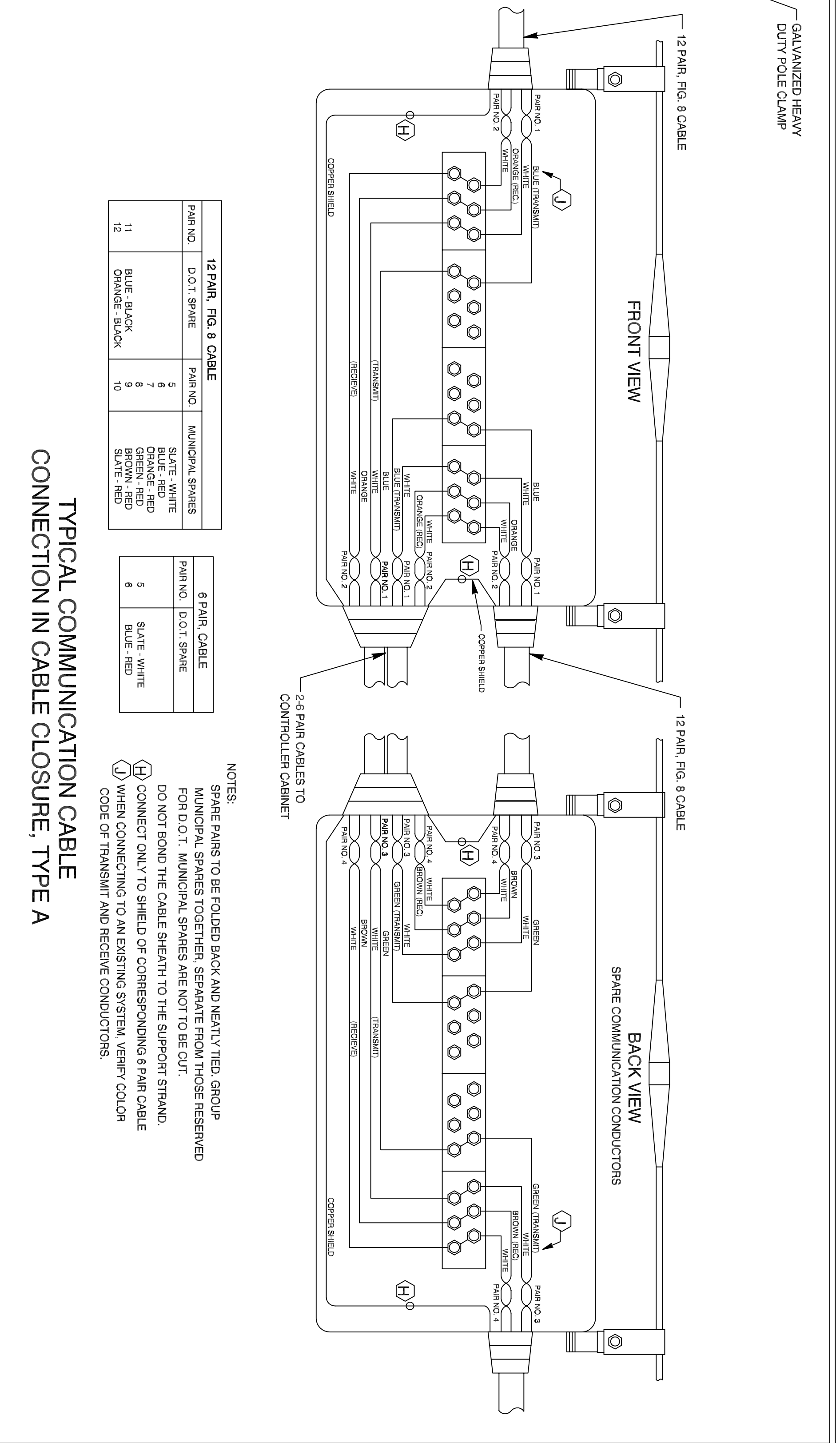
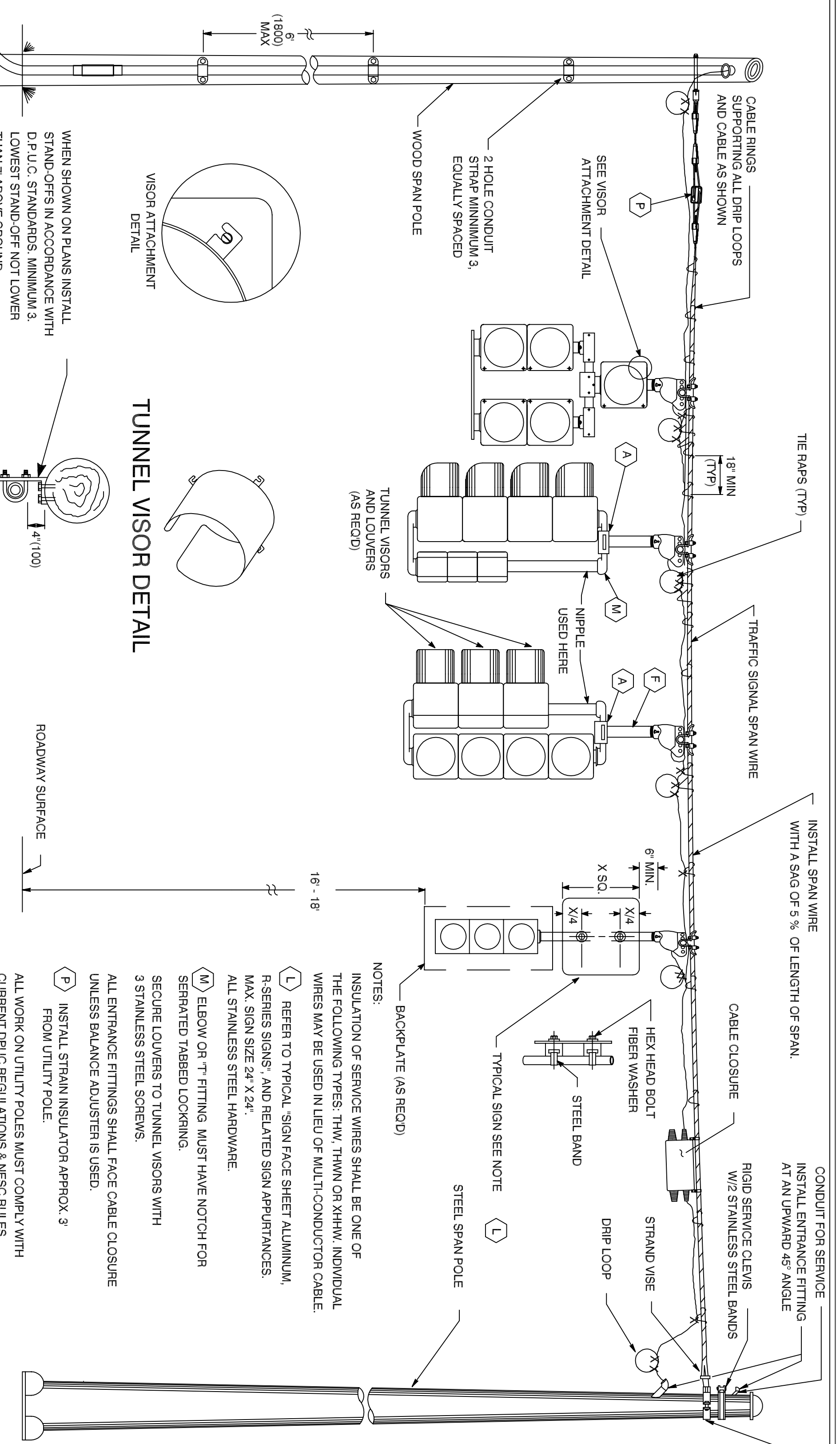
Standard Drawing No. ST-8	Job No.	Date January 2005
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**City of Hartford, Connecticut**  
 Department of Public Works  
**Standard Traffic/Equipment Details**  
 Traffic Foundations

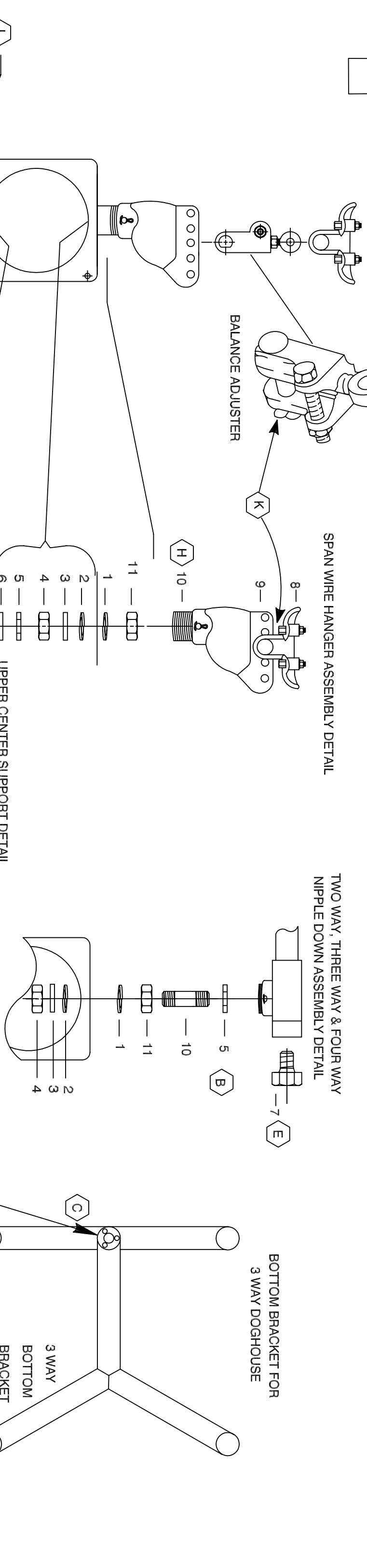


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	ST-8.DWG

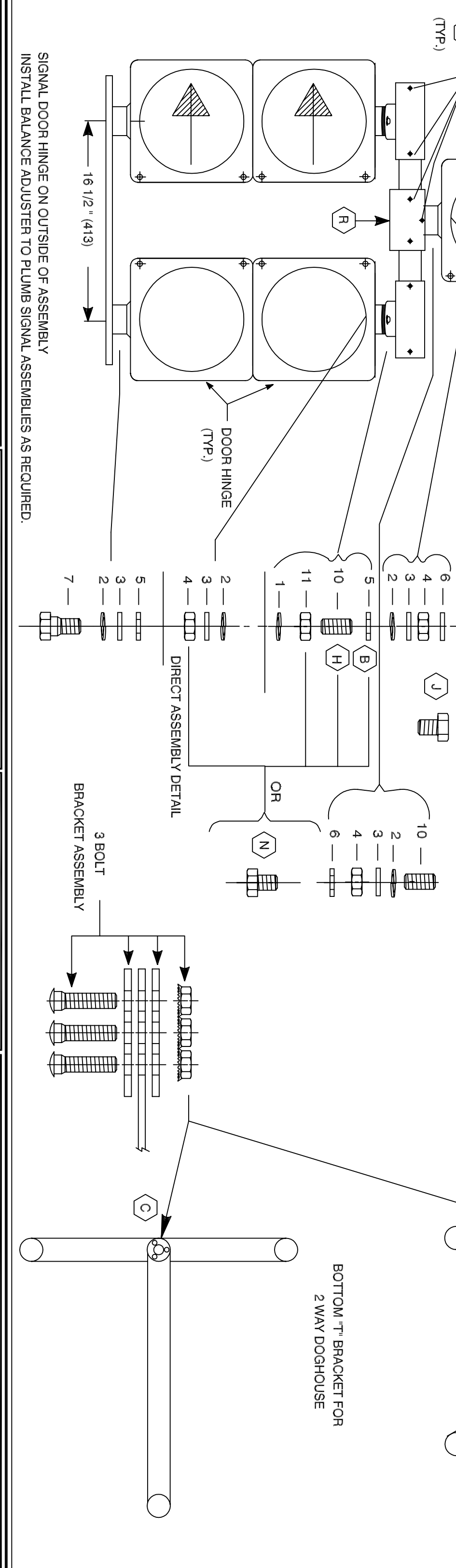


**TRAFFIC SIGNALS**  
**SPAN WIRE SUSPENDED**  
**CONDUIT CLAMP DETAIL**  
**TUNNEL VISOR DETAIL**  
**SPAN WIRE SUSPENDED**  
**TRAFFIC SIGNALS**  
**SPAN WIRE SUSPENDED**

**TRAFFIC SIGNAL CABLE COLOR ASSIGNMENTS**  
**PEDESTRIAN SIGNAL CABLE COLOR ASSIGNMENTS**



SIGNAL ASSEMBLY & CABLE USED	SIGNAL FUNCTION	ARTERY 1	ARTERY 2	SIDE STREET 1	SIDE STREET 2
2 - WAY	RED	RED	RED	BLACK	RED
	YELLOW	ORANGE	ORANGE	WHITE \ BLACK	GREEN
	GREEN	GREEN	GREEN	BLUE	WHITE
3 - WAY	RED	RED	RED	BLACK	RED
	YELLOW	ORANGE	ORANGE \ BLACK	WHITE \ BLACK	GREEN
	GREEN	GREEN	BLACK \ WHITE	BLUE	WHITE
4 - WAY	RED	RED	RED \ BLACK	BLACK	RED \ WHITE
	YELLOW	ORANGE	ORANGE \ BLACK	WHITE \ BLACK	GREEN \ WHITE
	GREEN	GREEN	GREEN \ BLACK	BLUE \ WHITE	WHITE \ BLACK
15 CONDUCTOR	RED	RED	RED \ BLACK	BLACK	RED \ WHITE
	YELLOW	ORANGE	ORANGE \ BLACK	WHITE \ BLACK	GREEN \ WHITE
	GREEN	GREEN	BLACK \ WHITE	BLUE \ WHITE	WHITE \ BLACK



SIGNAL ASSEMBLY & CABLE USED	SIGNAL FUNCTION	WIRE COLOR
WALK SIGNAL w/ PUSHBUTTON	DONT WALK	RED
	WALK	GREEN
WALK SIGNAL w/ PUSHBUTTON	NEUTRAL FOR WALK SIGNAL	WHITE
	NEUTRAL FOR PUSHBUTTON	ORANGE
WALK SIGNAL w/ PUSHBUTTON	NEUTRAL FOR PUSHBUTTON	ORANGE
	SPARE CONDUCTOR *	BLUE \ BLACK
WALK SIGNAL w/ PUSHBUTTON	RED	RED
	YELLOW	ORANGE
WALK SIGNAL w/ PUSHBUTTON	NEUTRAL FOR TRAFFIC SIGNAL	GREEN
	NEUTRAL FOR PEDESTRIAN PUSHBUTTON	WHITE
WALK SIGNAL w/ PUSHBUTTON	NEUTRAL FOR PUSHBUTTON	BLACK
	SPARE CONDUCTOR *	WHITE \ BLACK
WALK SIGNAL w/ PUSHBUTTON	RED	RED
	YELLOW	ORANGE
WALK SIGNAL w/ PUSHBUTTON	NEUTRAL FOR TRAFFIC SIGNAL	GREEN
	NEUTRAL FOR PEDESTRIAN PUSHBUTTON	WHITE
WALK SIGNAL w/ PUSHBUTTON	NEUTRAL FOR PUSHBUTTON	BLACK
	SPARE CONDUCTOR *	WHITE \ BLACK

Revisions

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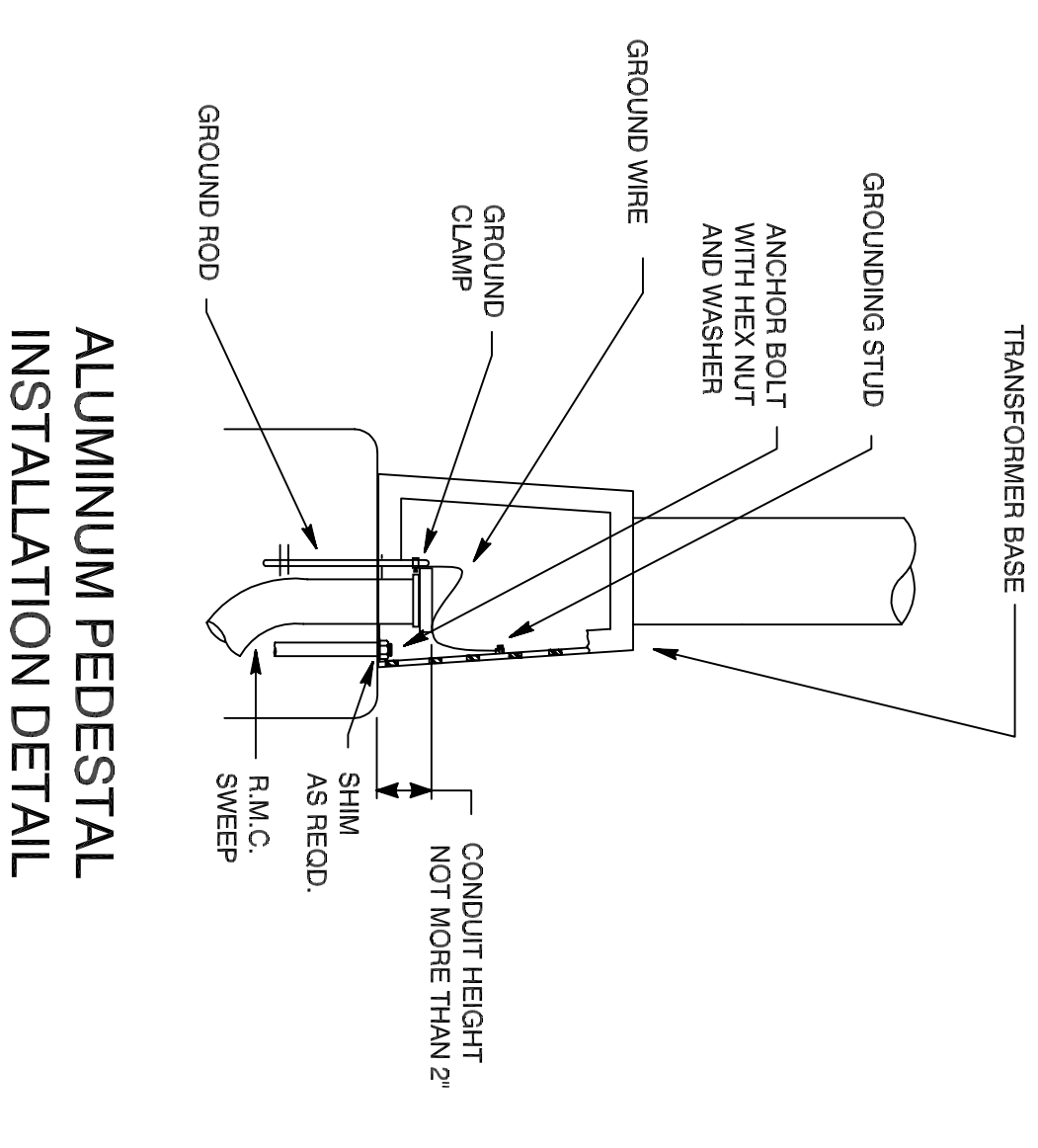
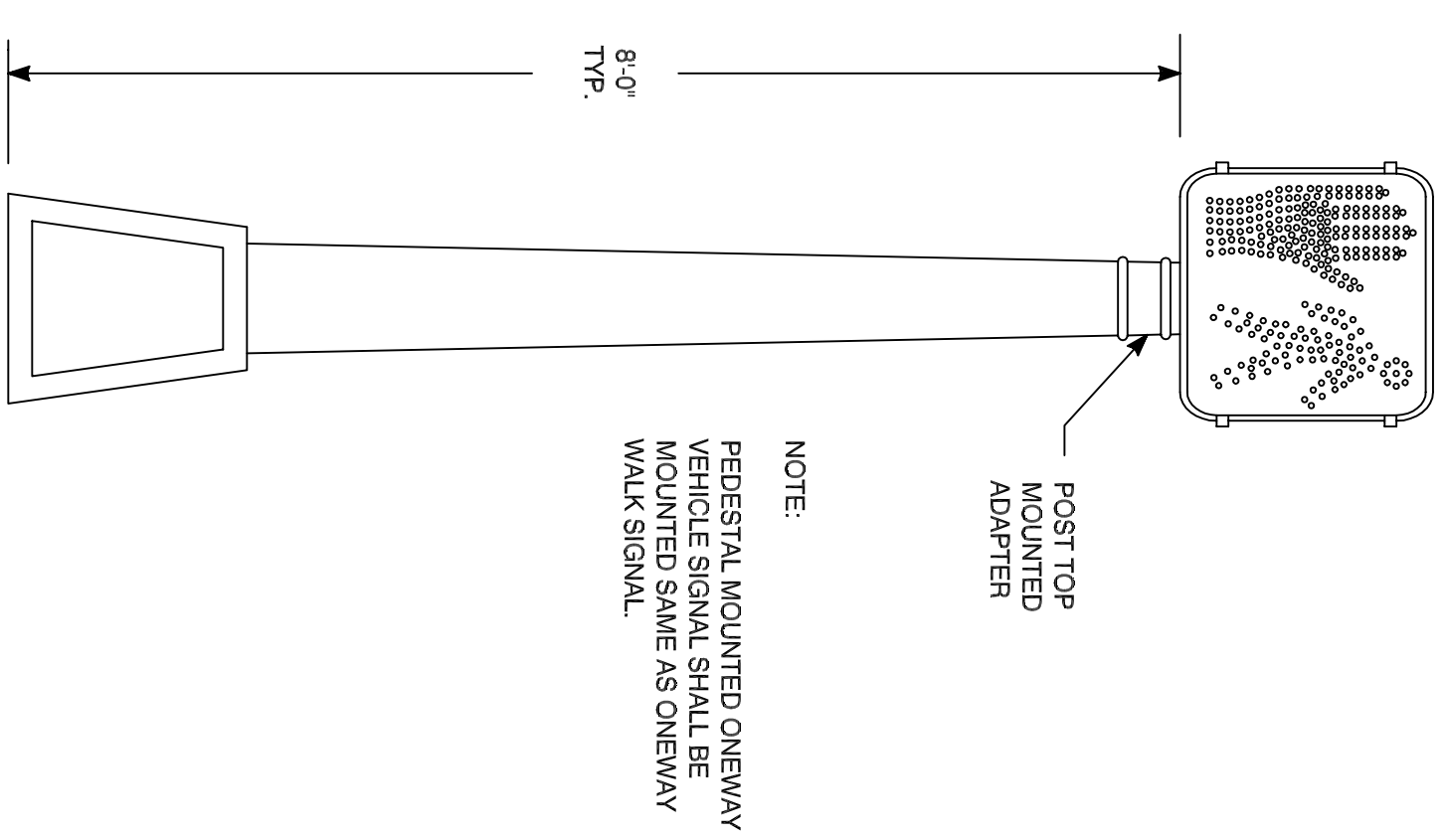
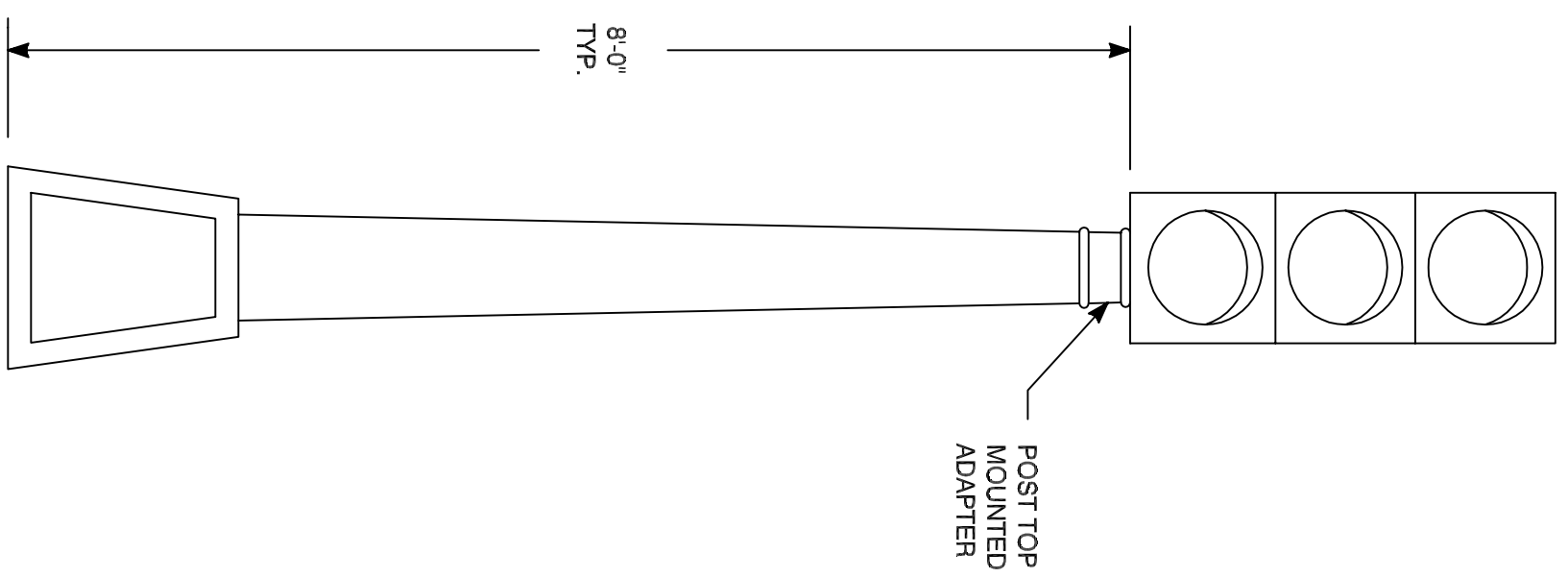
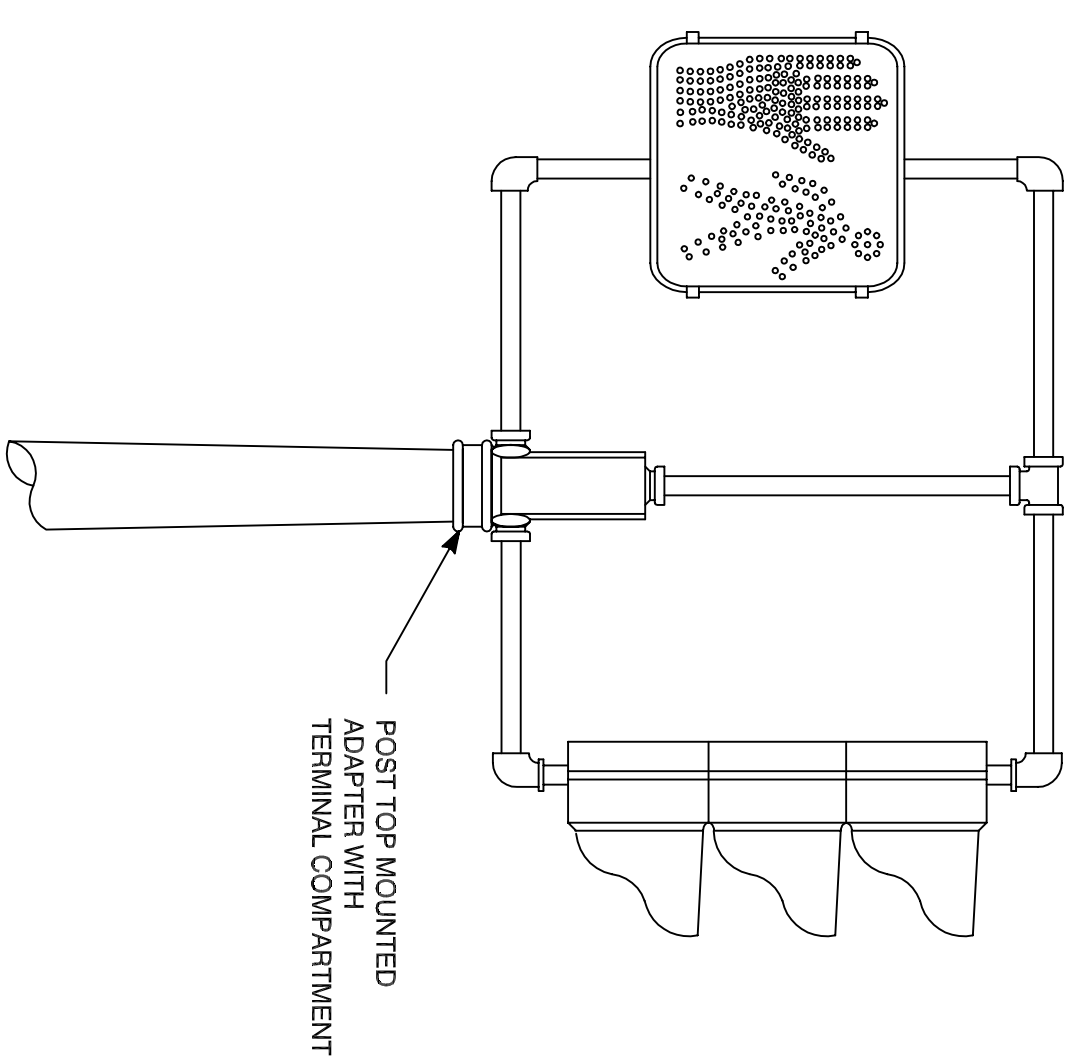
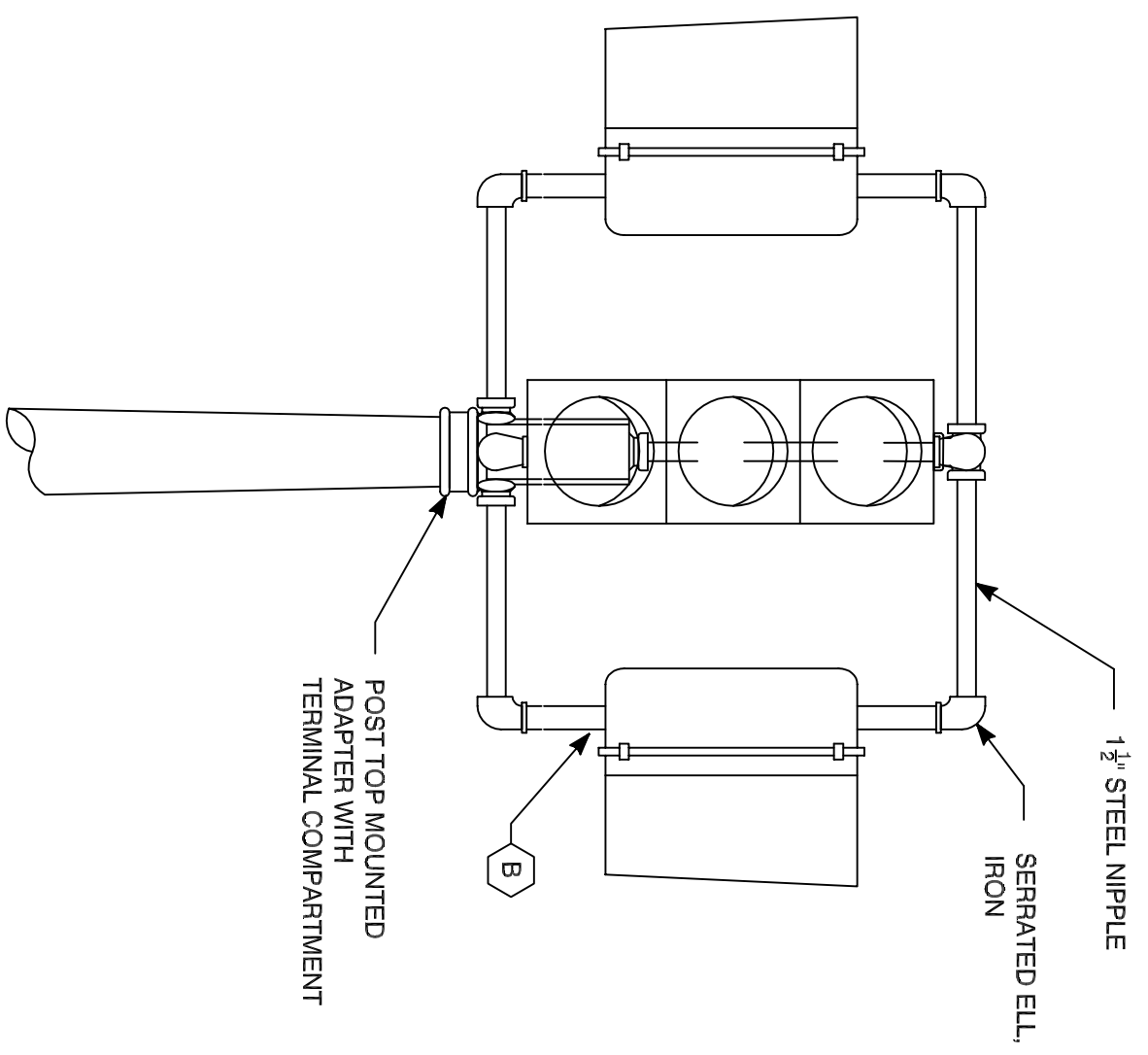
By	Date
Drawn	Checked
Recommended	Approved
Recorded	

Standard Drawing No. ST-9 Job No. Date January 2005

**City of Hartford, Connecticut**  
**Department of Public Works**

**Standard Traffic/Equipment Details**  
**Typical Signal Installation**

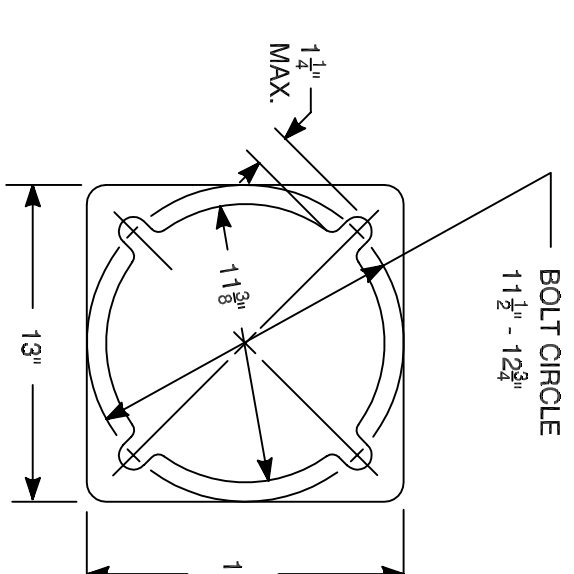
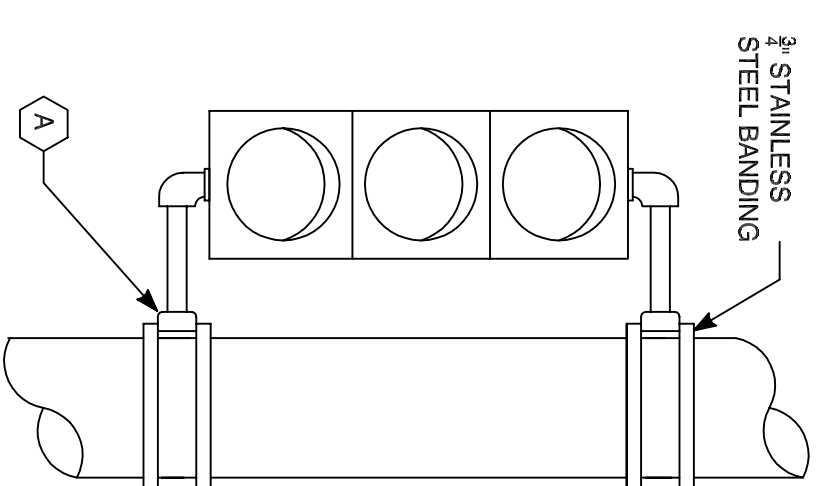
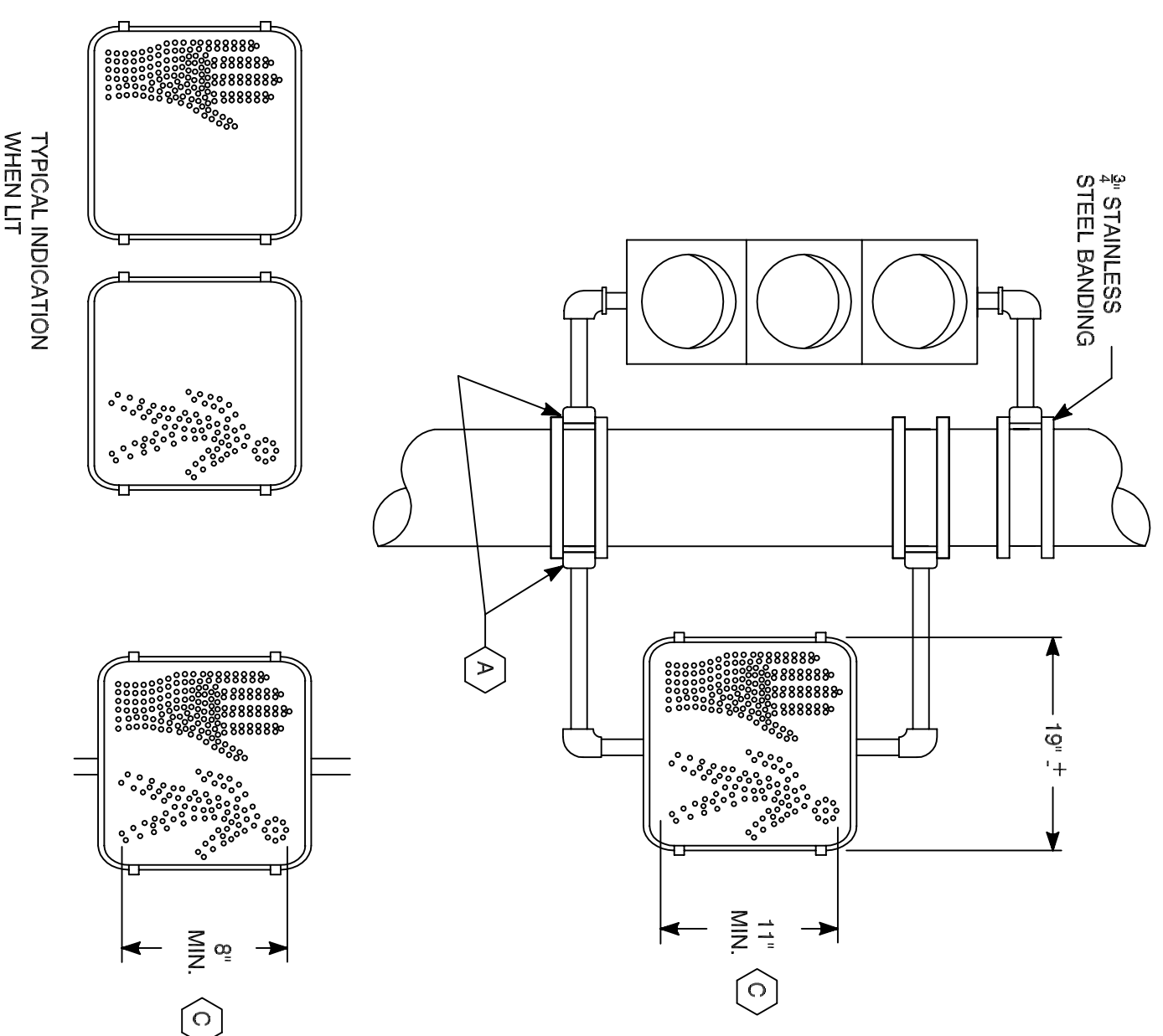
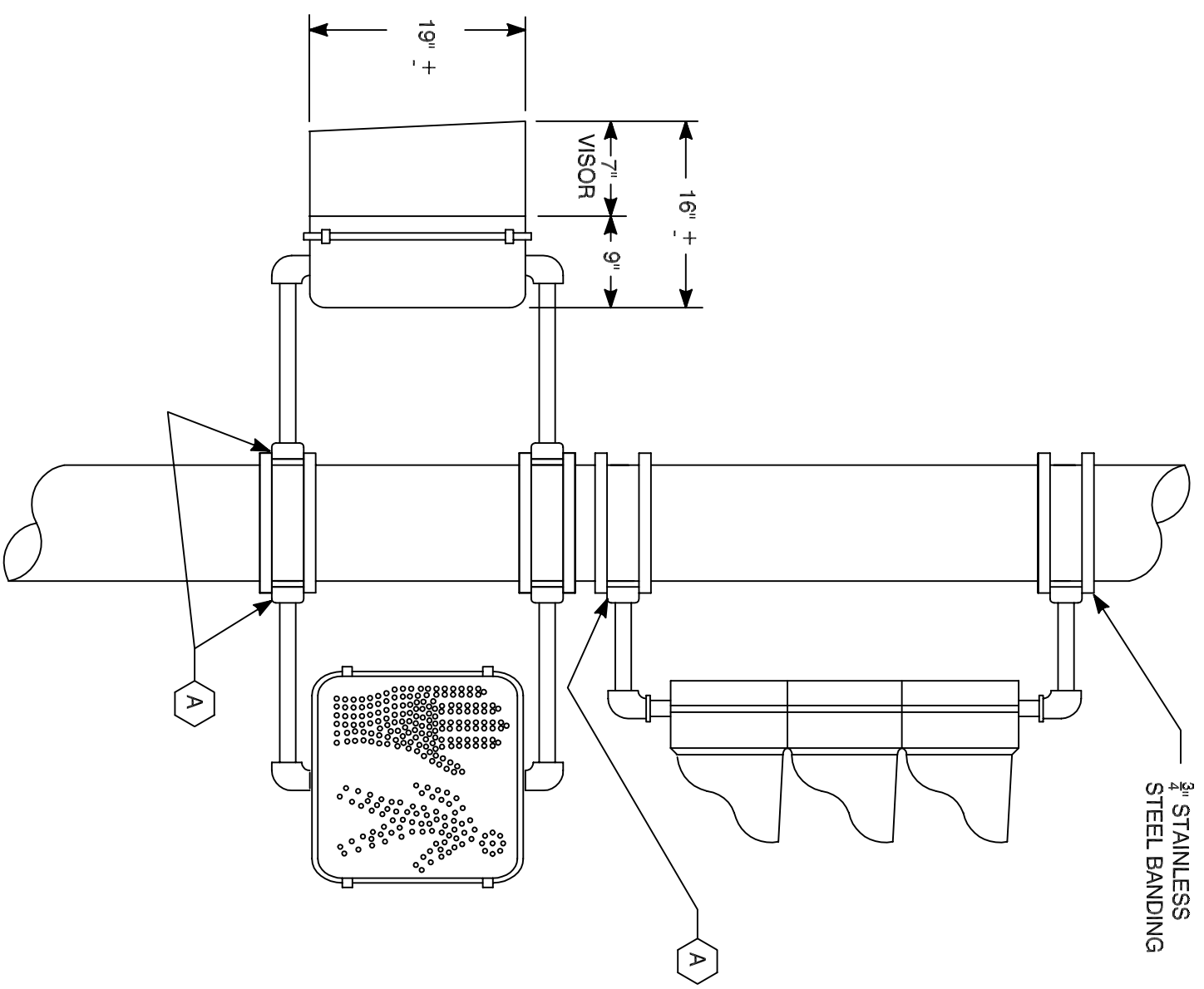
Sheet No. File Name ST-9.DWG



ONE WAY TRAFFIC SIGNAL  
PEDESTAL MOUNTED

ONE WAY WALK SIGNAL  
PEDESTAL MOUNTED

ALUMINUM PEDESTAL  
INSTALLATION DETAIL



PLAN OF  
PEDESTAL BASE

- NOTES:
- Ⓐ USE 1/2" PLATE WITH CABLE GUIDE IN LOWER BRACKET.
  - Ⓑ REFER TO TRAFFIC SIGNAL INSTALLATION TYPICAL DETAIL FOR ASSEMBLY HARDWARE.
  - Ⓒ REFER TO TRAFFIC CONTROL SIGNAL PLAN FOR SIZE OF PEDESTALIAN SIGNAL.
- LED WALK SIGNAL LAMPS ARE MAXIMUM 15 WATTS, WARRANTED AT 5 YEAR LIFE.

ONE WAY TRAFFIC SIGNAL  
POLE MOUNTED

Revisions	By	Date

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Standard Drawing No. ST-10

Job No.

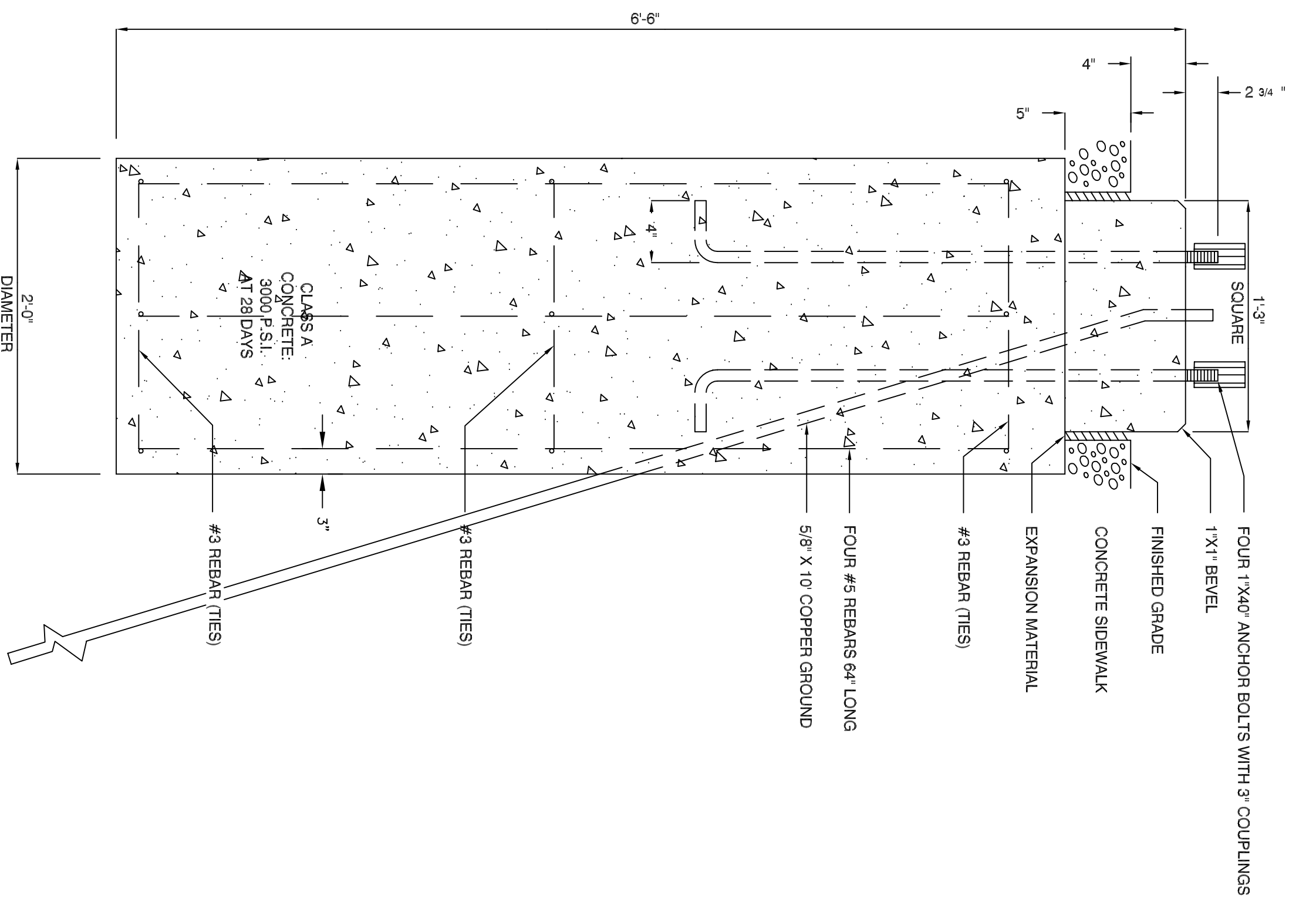
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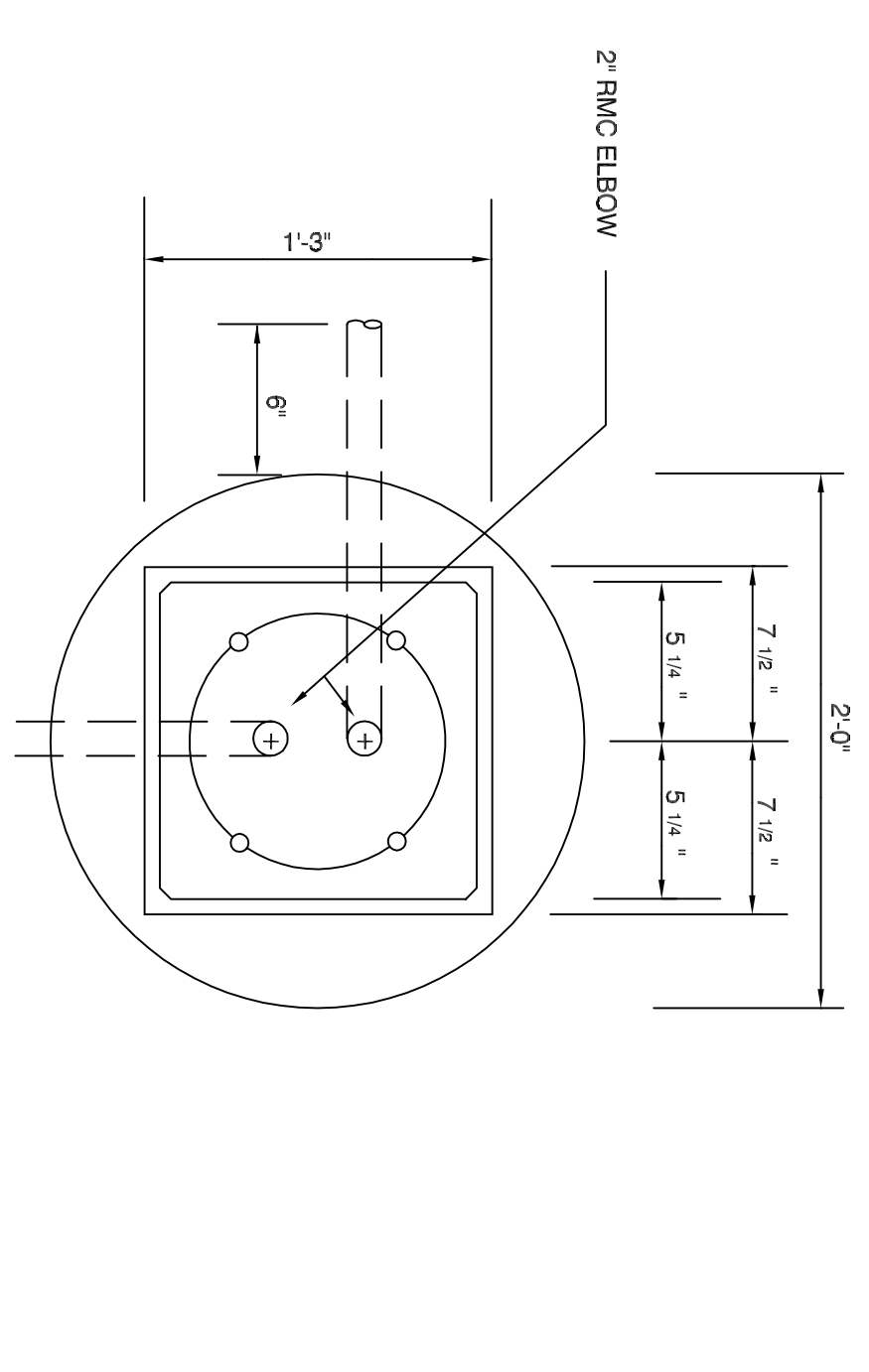
City of Hartford, Connecticut  
Department of Public Works  
Standard Traffic/Equipment Details  
Typ. Ped./Traf. Pole Mounted Signals



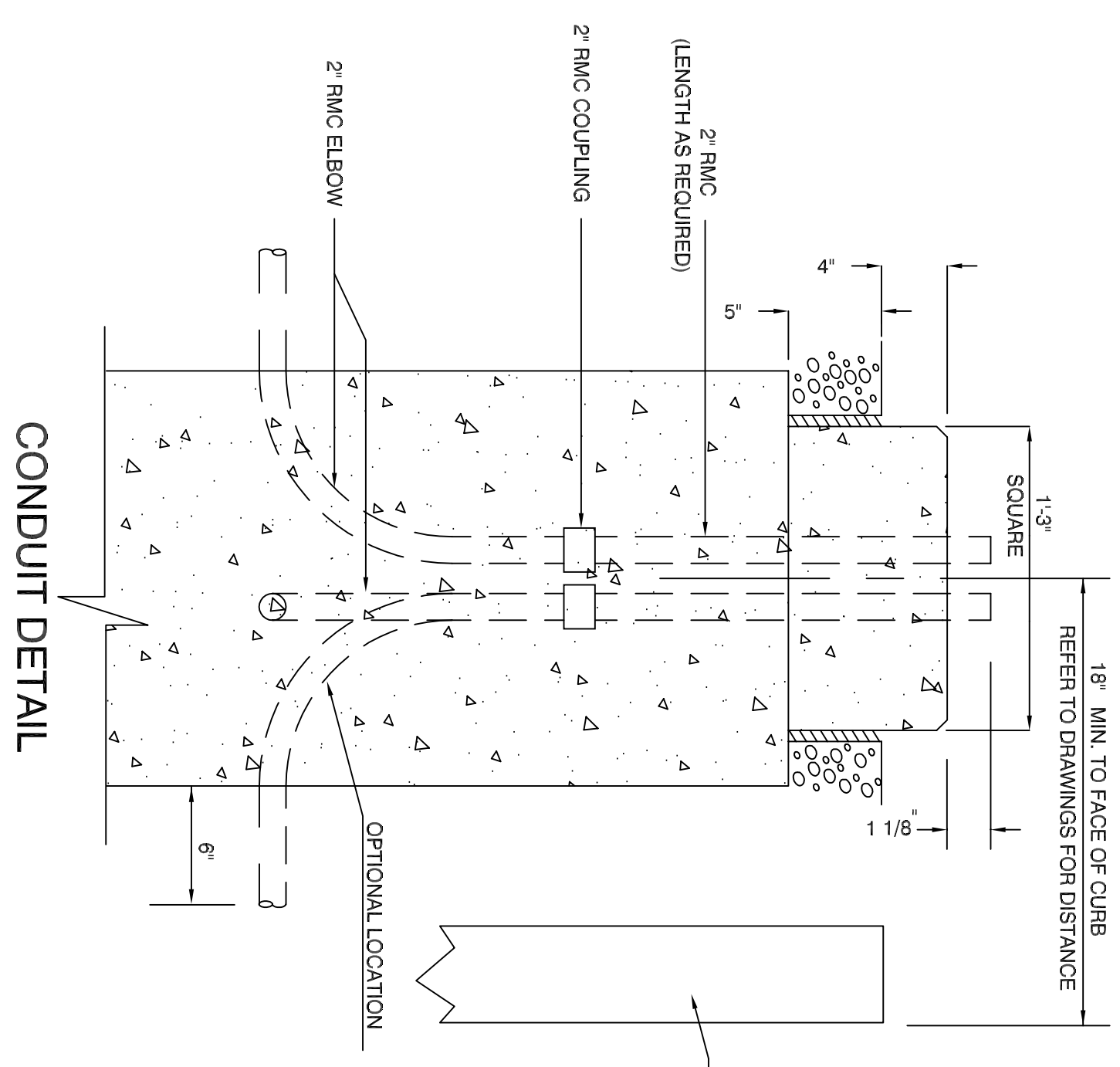
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File Name  
ST-10.DWG



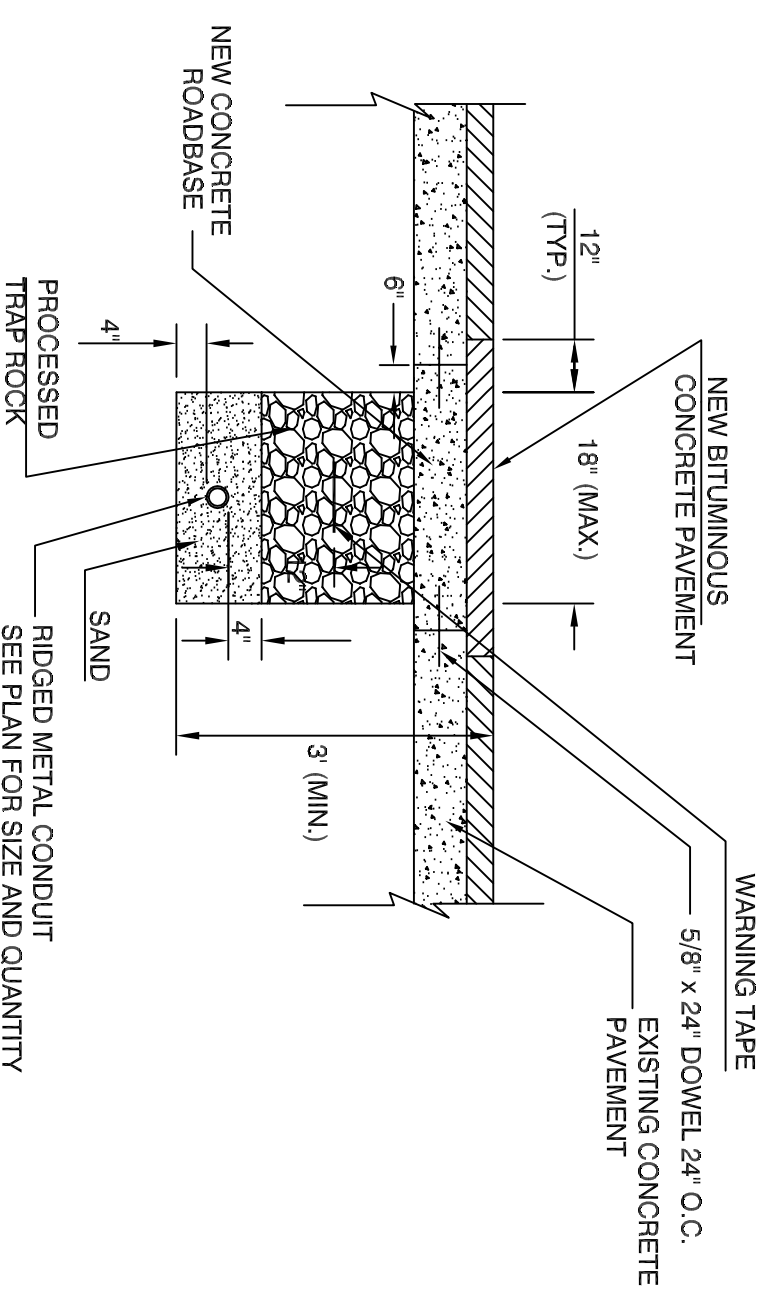
LIGHT POLE FOUNDATION



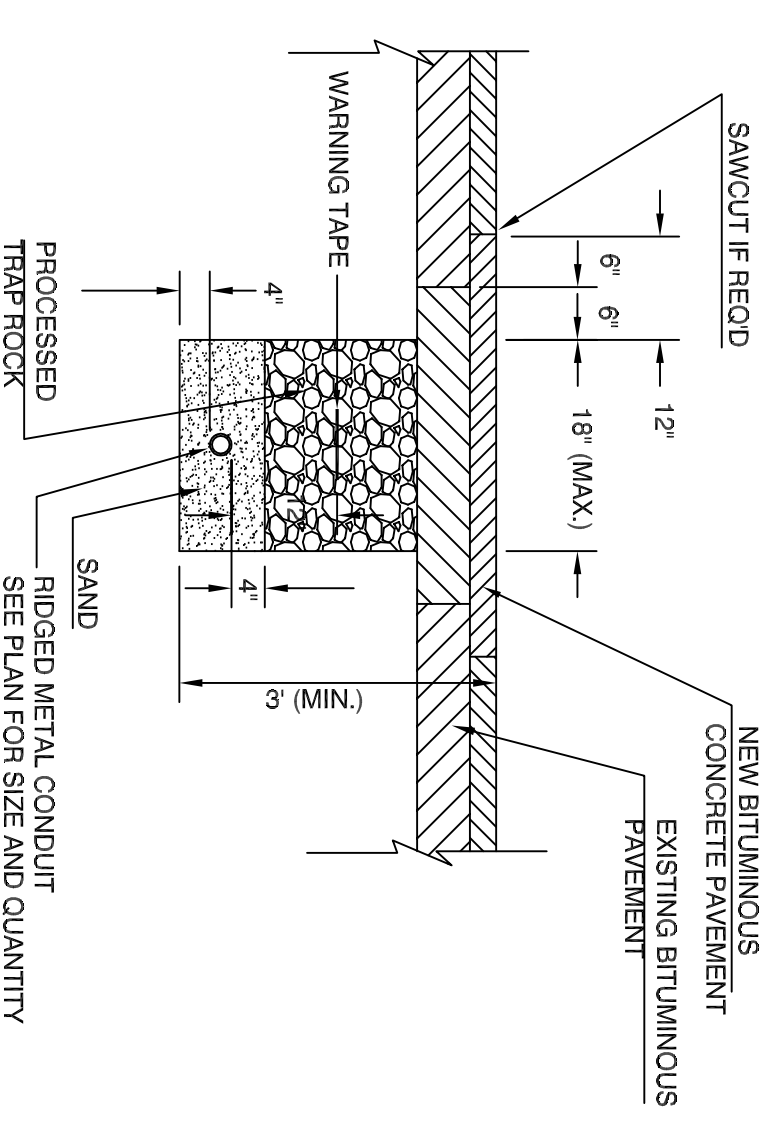
TOP ELEVATION



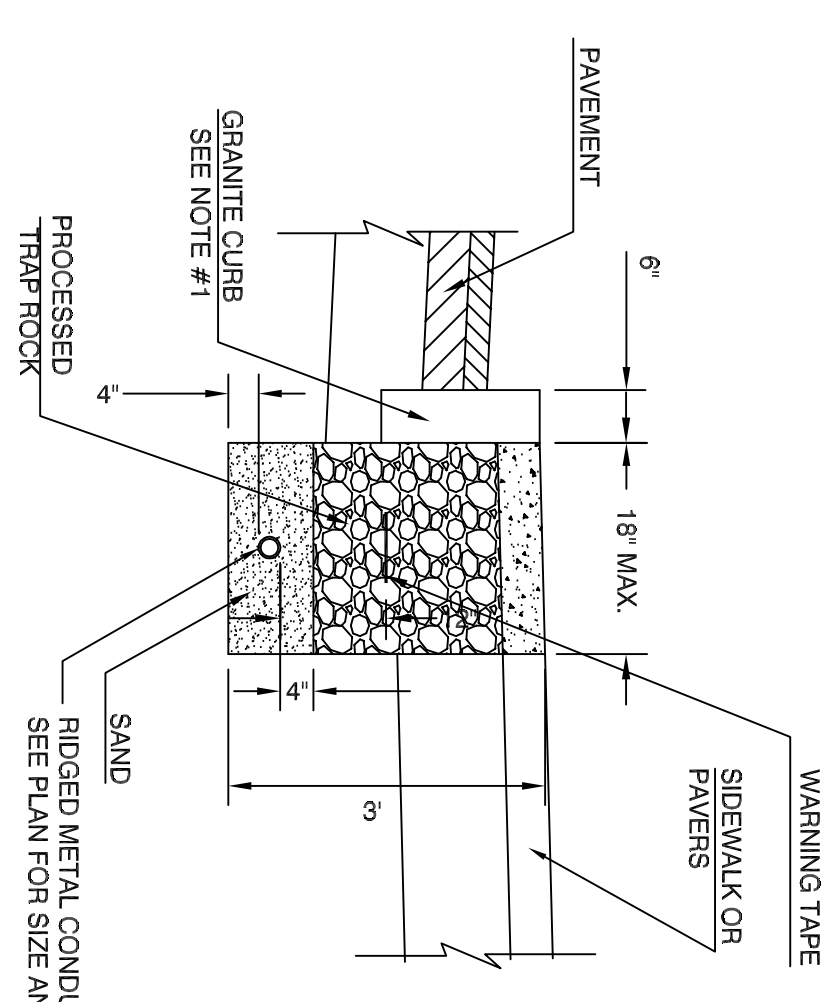
CONDUIT DETAIL



TYPE II TRENCHING AND BACKFILLING  
RIDGED METAL CONDUIT IN CONCRETE ROADBASE

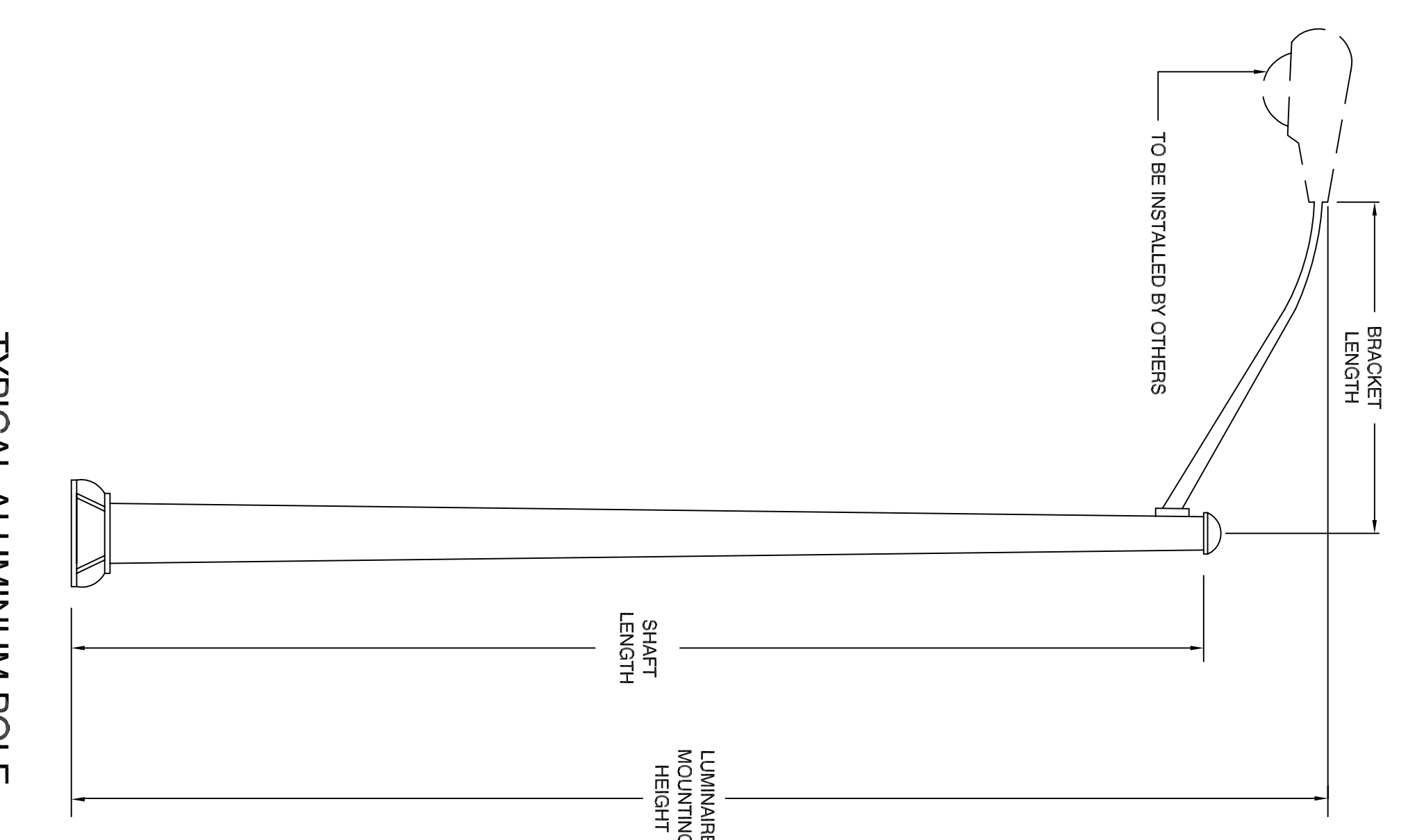


TYPE I TRENCHING AND BACKFILLING  
RIDGED METAL CONDUIT IN BIT. PAVEMENT

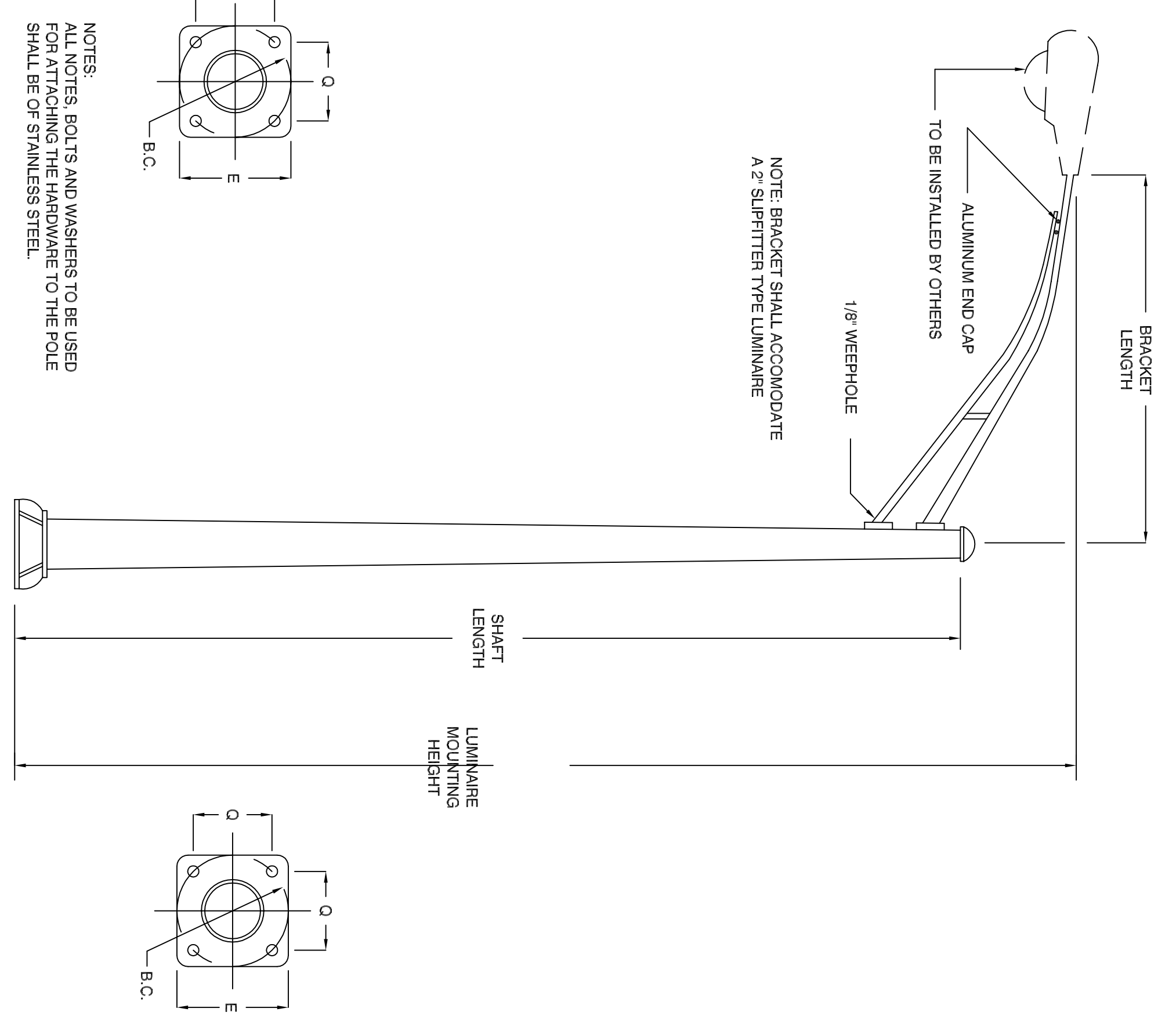


TYPE I TRENCHING AND BACKFILLING  
RIDGED METAL CONDUIT IN CONCRETE SIDEWALK

NOTE #1-IF EXCAVATIONS ADJACENT TO EXISTING CURB, APPROPRIATE PRECAUTIONS ARE TO BE TAKEN TO AVOID DISPLACEMENT OF CURBING



TYPICAL ALUMINUM POLE  
WITH SINGLE ARM BRACKET



TYPICAL ALUMINUM POLE  
WITH TRUSS ARM BRACKET

NOTES:  
ALL NOTES BOLTS AND WASHERS TO BE USED FOR ATTACHING THE HARDWARE TO THE POLE SHALL BE OF STAINLESS STEEL.

POLE TYPE	SHAFT SIZE			ANCHOR BASE			BRACKET			
	LENGTH	BOTTOM DIA.	TOP DIA.	GAGE	"C"	"B"	"E"	SIZE	LENGTH	LUMINAIRE MOUNTING HEIGHT
ALUMINUM SINGLE ARM	28'	6"	4 1/2"	0.188	8 1/2"	12"	12"	3 1/2" x 2 3/8"	6'	30'
ALUMINUM TRUSS ARM	27'	6"	5 1/2"	0.188	8 1/2"	12"	12"	3 1/2" x 2 3/8"	12'	30'

POLE #	STATION	TYPE OF POLE	BRACKET LENGTH

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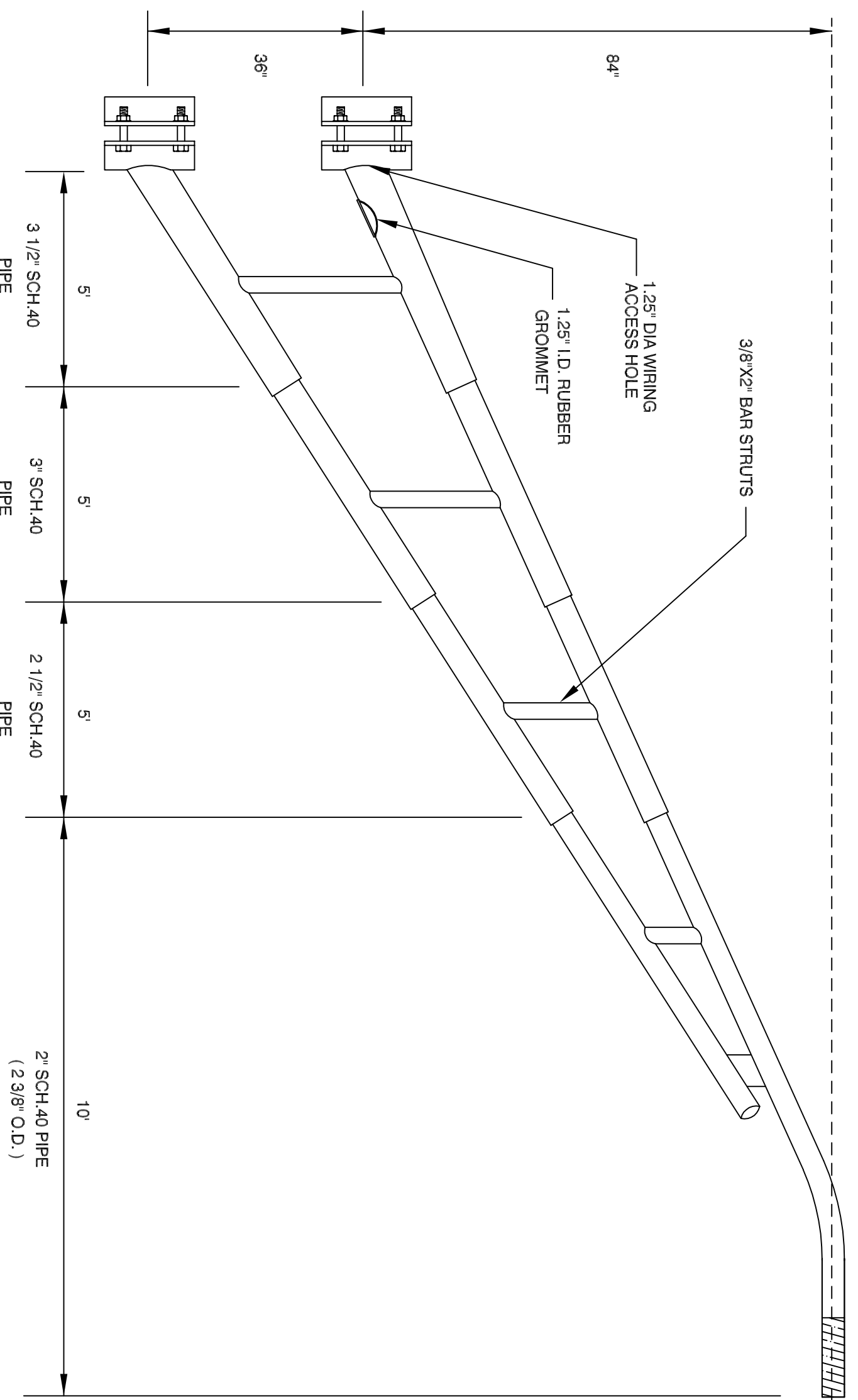
Standard Drawing No. ST-11  
Job No.  
Date January 2005



City of Hartford, Connecticut  
Department of Public Works  
Standard Roadway and Street Details  
Street Light Poles, Foundations, Conduit

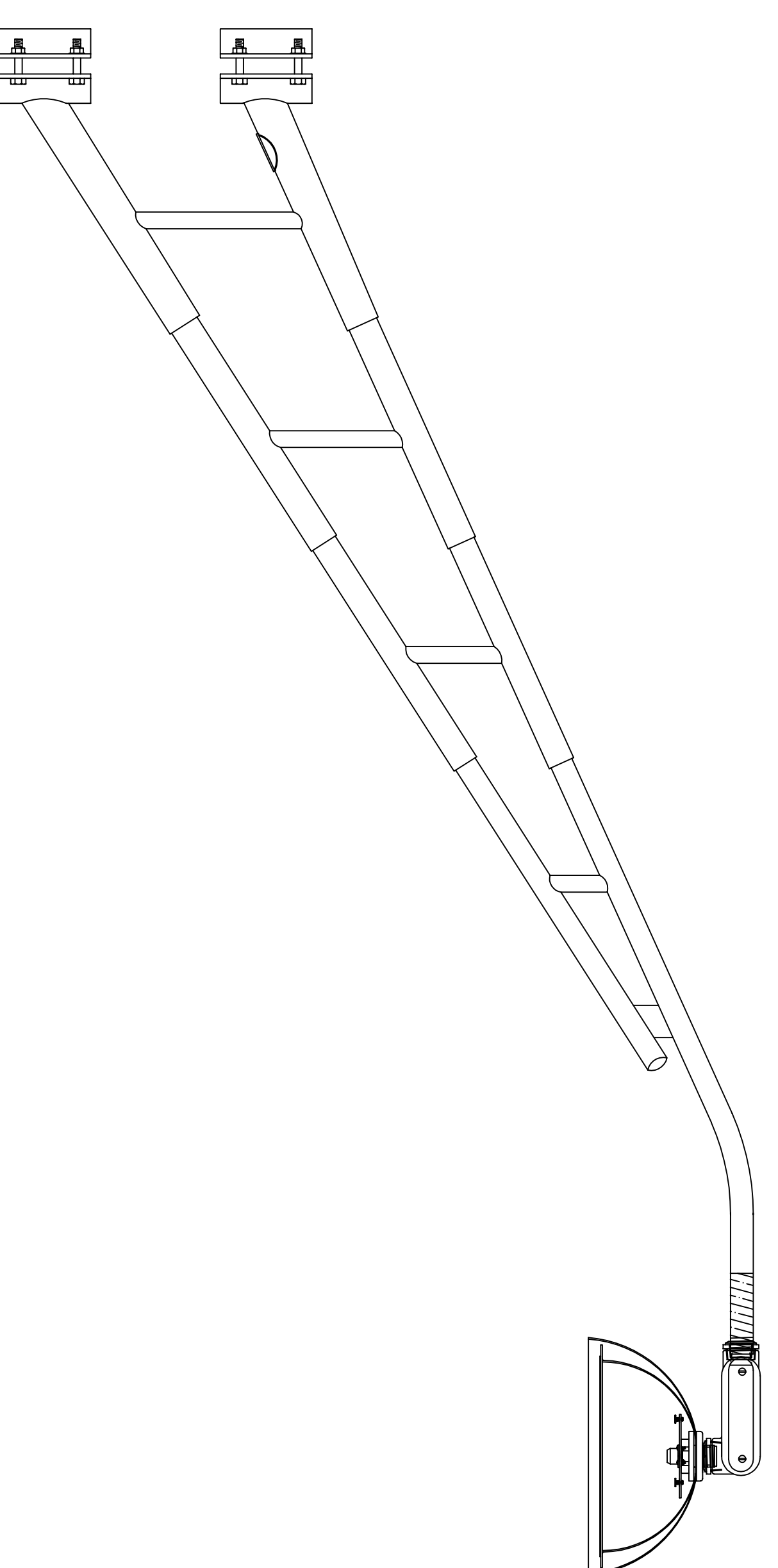


Sheet No.  
File Name  
ST-11.DWG



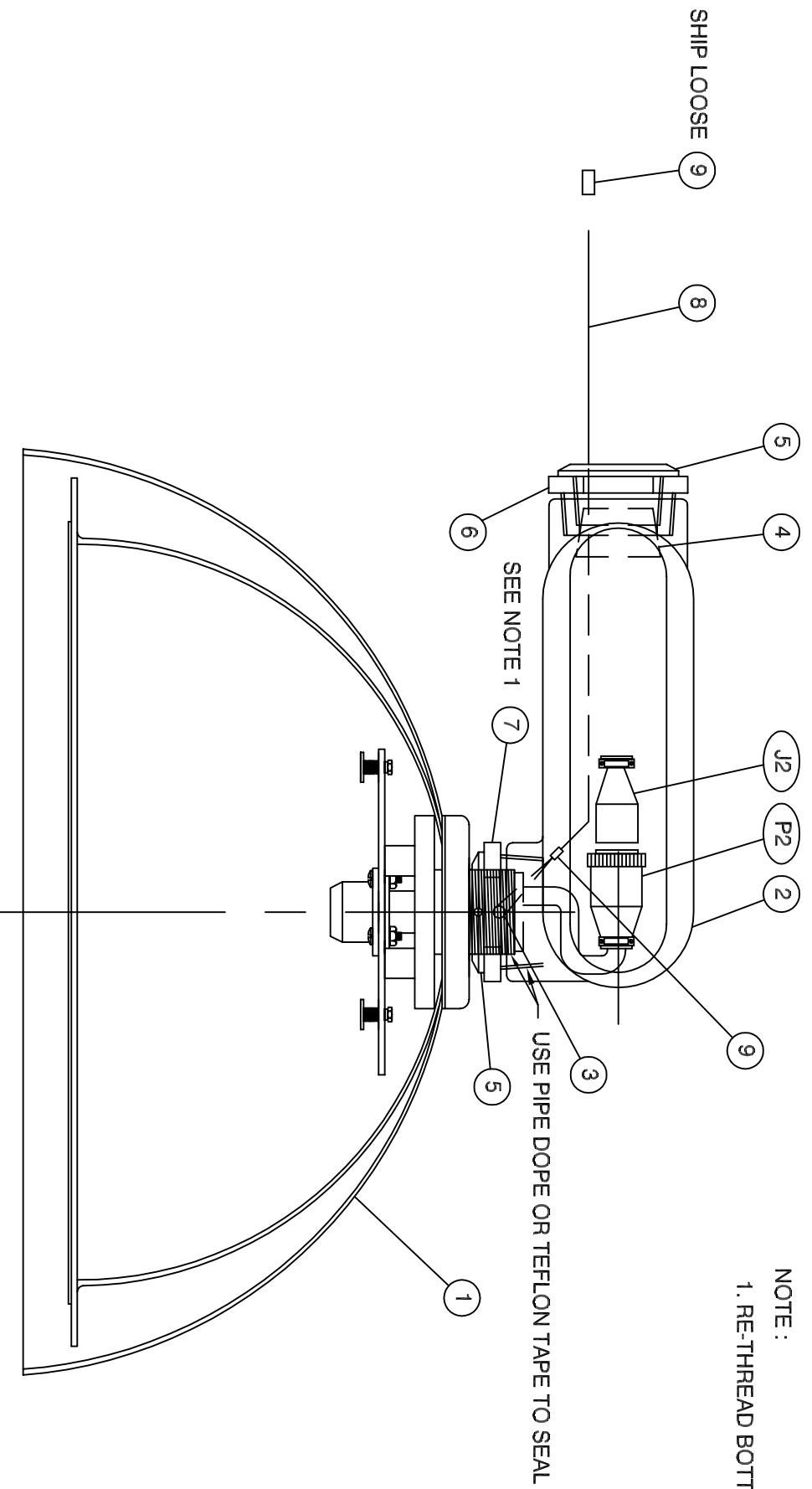
**CCTV CAMERA MOUNTING BRACKET**

- NOTES:
1. PROVIDE THREAD AT THE END OF 2" PIPE TO INSTALL A 2" CONDUIT BOX.
  2. FOR CLAMP DIMENSIONS EXISTING POLES SHALL BE FIELD MEASURED AT LOCATIONS AS DIRECTED BY ENGINEER.



**TYPICAL MOUNTING OF CAMERA DOME TO THE BRACKET**


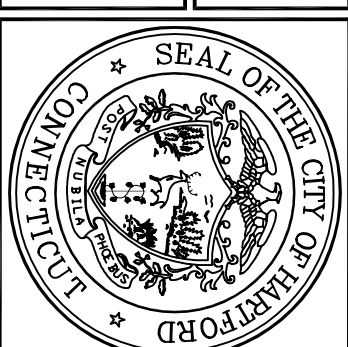
- NOTE:
1. THE CONDUIT BOX SHALL BE INSTALLED WITH LOCK NUTS & RUBBER STOPPER
  2. THE DOME SHALL BE SECURED WITH SAFETY CABLE RECOMMENDED BY THE MANUFACTURER
  3. CONTRACTOR SHALL INSTALL THE DOME WITH ALL SAFETY ACCESSORIES
  4. SUPPLIED BY DOME MANUFACTURER AND MAKE THE CONNECTIONS WATER TIGHT.
  4. PEDESTAL MOUNTED ONEWAY VEHICLE SIGNAL SHALL BE MOUNTED SAME AS ONEWAY WALK SIGNAL.

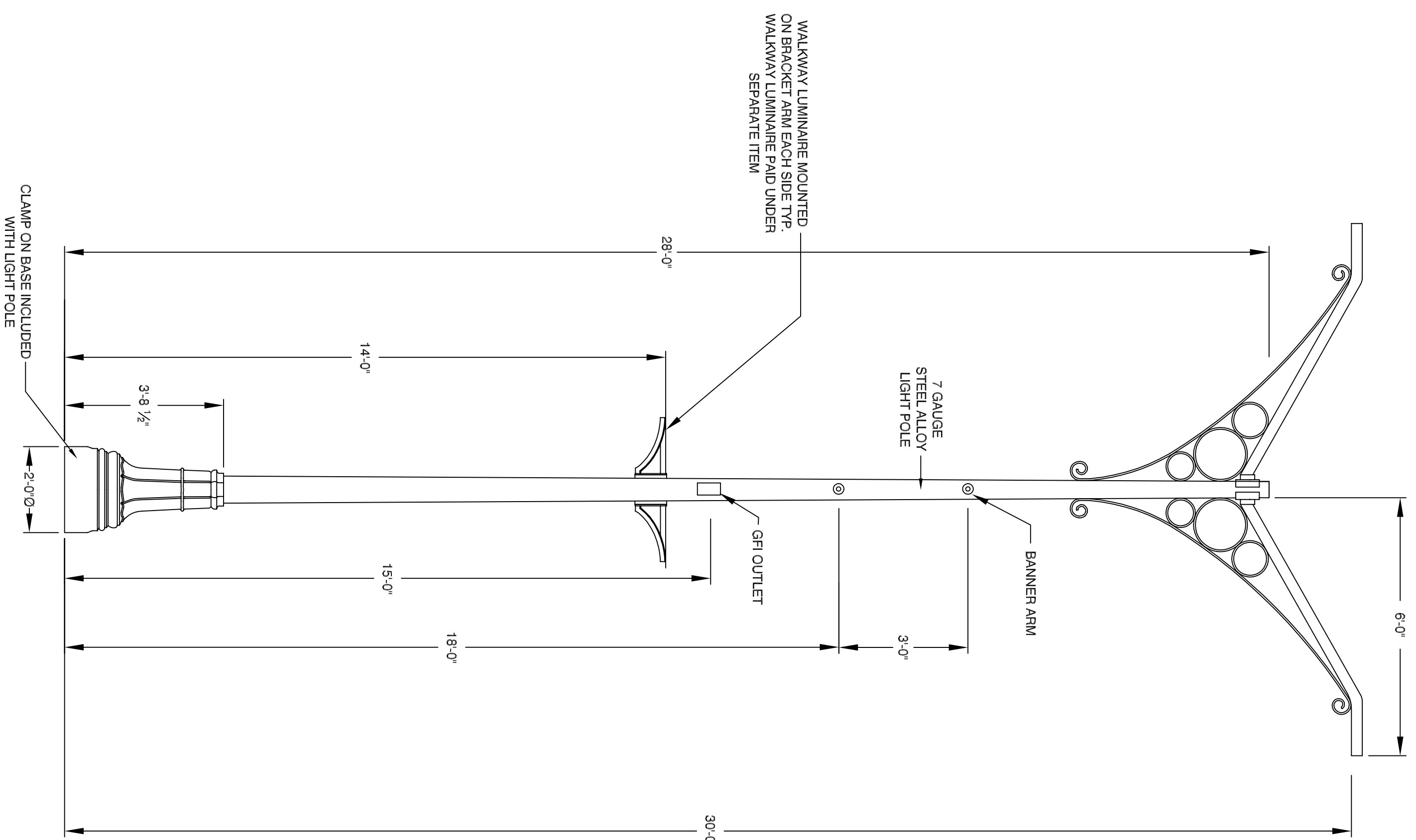


- NOTE:
1. RE-THREAD BOTTOM OUTLET TO 1 1/2 - 11 1/2 NPS STRAIGHT PIPE THREAD

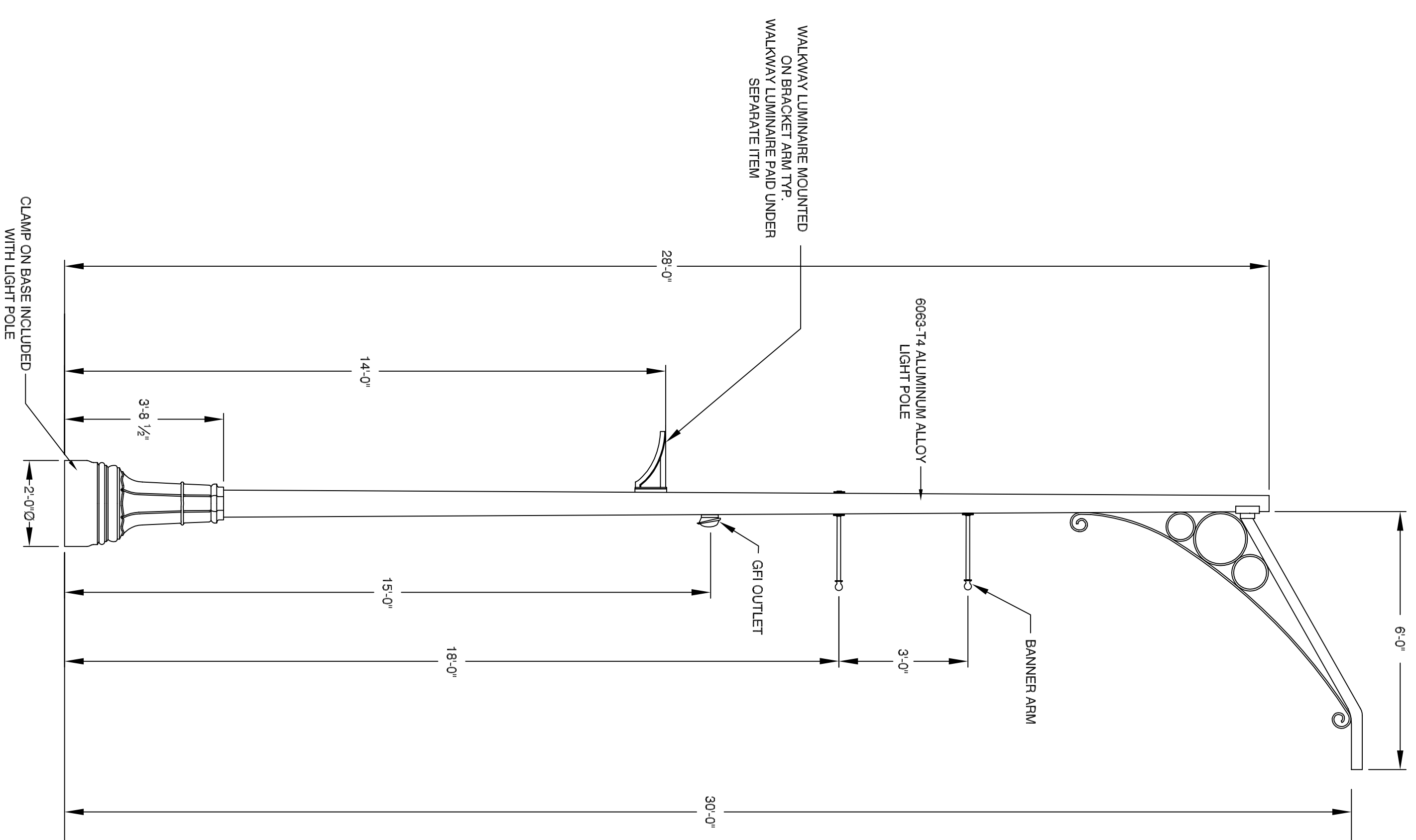
QTY	PART NO.	DESCRIPTION
1	1	18" DRONE DOME TOP WITH WEATHER DOME
1	2	CONDUIT BOX, RED DOT #ALB.6, 2"
1	3	PIN
1	4	RUBBER STOPPER
2	5	CONDUIT NUT, 1 1/2" NPT (SHIP LOOSE)
1	6	HEX REDUCER, 2" x 1 1/2" NPT
1	7	MODIFIED HEX REDUCER, 2" x 1 1/2" STRAIGHT
1	8	CABLE, 3/32" DIA., PLASTIC COATED 3 FT. LG.
2	9	WIRE CLAMP (SHIP 1 PC. LOOSE)

**CAMERA DOME**

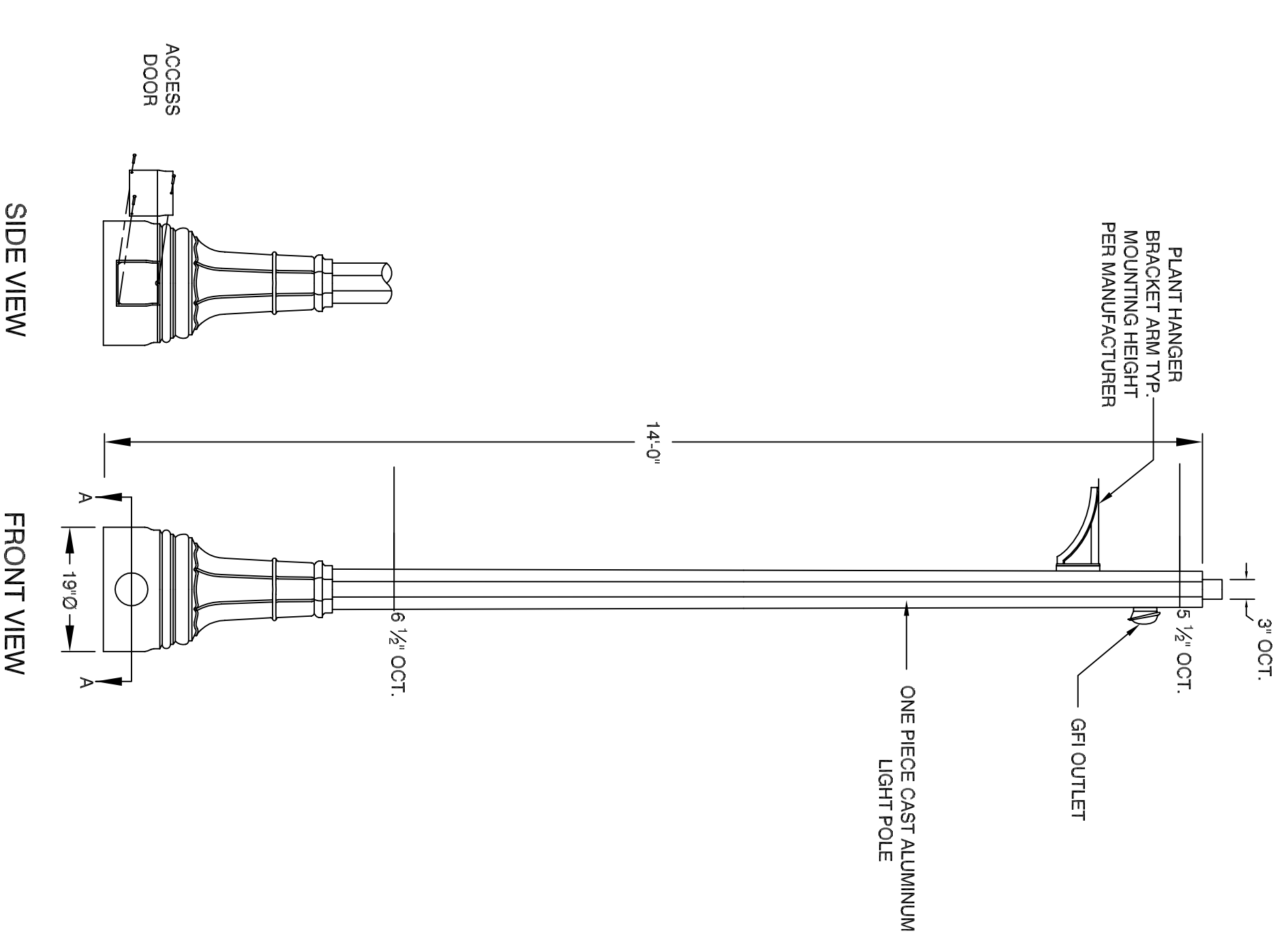
<b>Revisions</b>	<b>By</b>	<b>Date</b>	<b>Notice</b>	<b>Sign-Off's</b>	<b>By</b>	<b>Date</b>
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				Recommended		
				Approved		
				Recorded		
Standard Drawing No. ST-12		Job No.	Date	January 2005		
			<b>City of Hartford, Connecticut</b> Department of Public Works			
<b>Standard Traffic/Equipment Details</b> CCTV Camera/Mounting Bracket						
Sheet No.			File Name			
ST-12.DWG			ST-12.DWG			



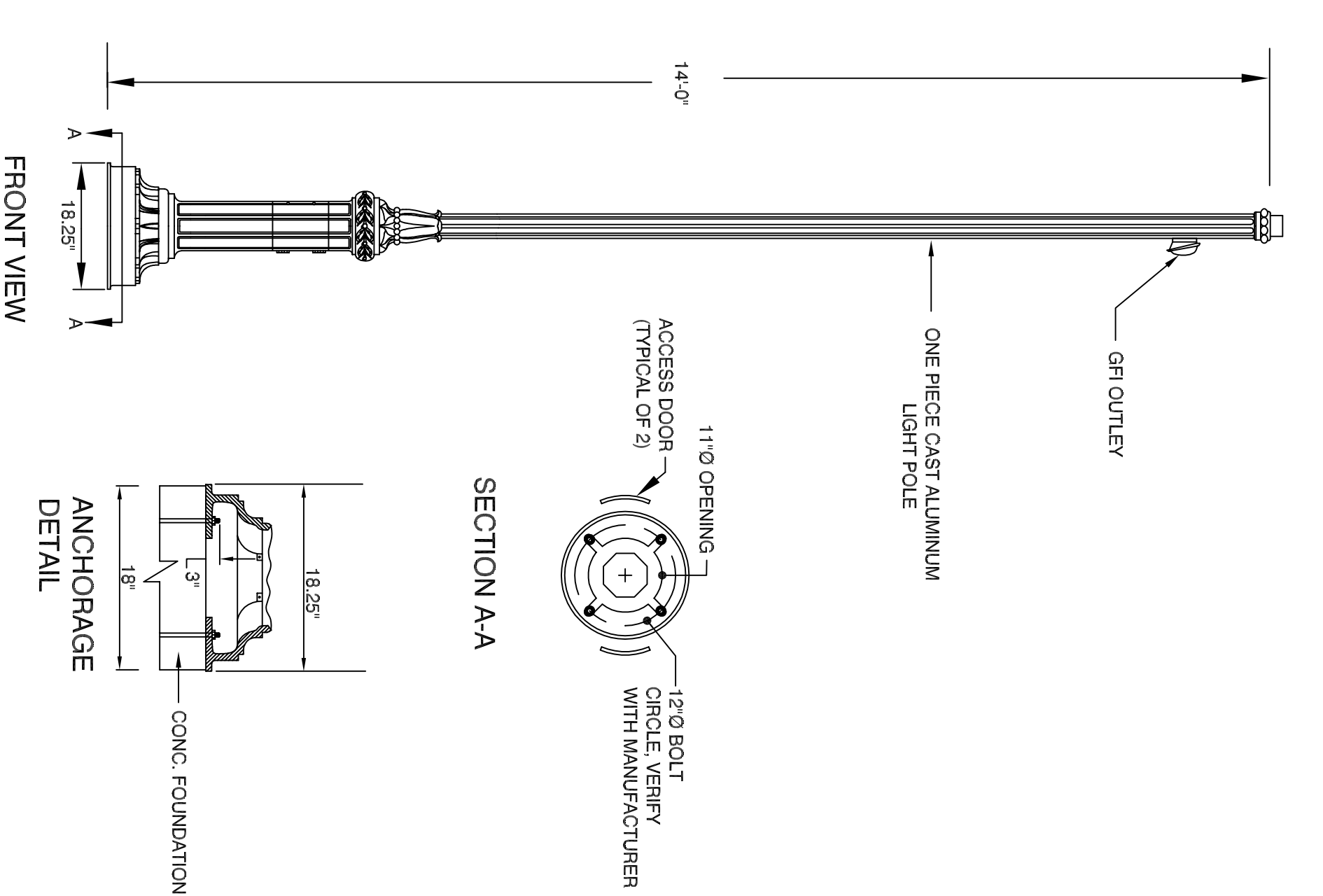
28' ORNAMENTAL STREET LIGHT POLE STEEL



28' ORNAMENTAL STREET LIGHT POLE ALUMINUM



14' ORNAMENTAL LIGHT POLE WASHINGTON



14' ORNAMENTAL LIGHT POLE MADISON

- NOTES:**
1. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF NEW LIGHTING WITH THE REMOVAL OF THE EXISTING SUCH THAT ILLUMINATION OF THE STREET IS MAINTAINED DURING CONSTRUCTION.
  2. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL UNLESS OTHERWISE NOTED.
  3. ROUTE CONDUITS TO AVOID CONFLICT WITH EXISTING AND PROPOSED STRUCTURES AND TREES.
  4. LUMINAIRES UTILIZE ANIES TYPE III DISTRIBUTION, WHICH SHALL BE PARALLEL TO THE CURB LINE.
  5. 6 BRACKET ARMS, LUMINAIRES, PEDESTRIAN BRACKETS HANGERS, BANNER ARMS AND GFI OUTLETS SHALL BE PAID FOR UNDER ORNAMENTAL LIGHT POLE ACCESSORIES, REFER TO THE LIGHT SCHEDULE OR LEGEND ON THE DRAWINGS FOR POLE ACCESSORY REQUIREMENTS.

Revisions	By	Date

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Standard Drawing No. SS-1

Job No.

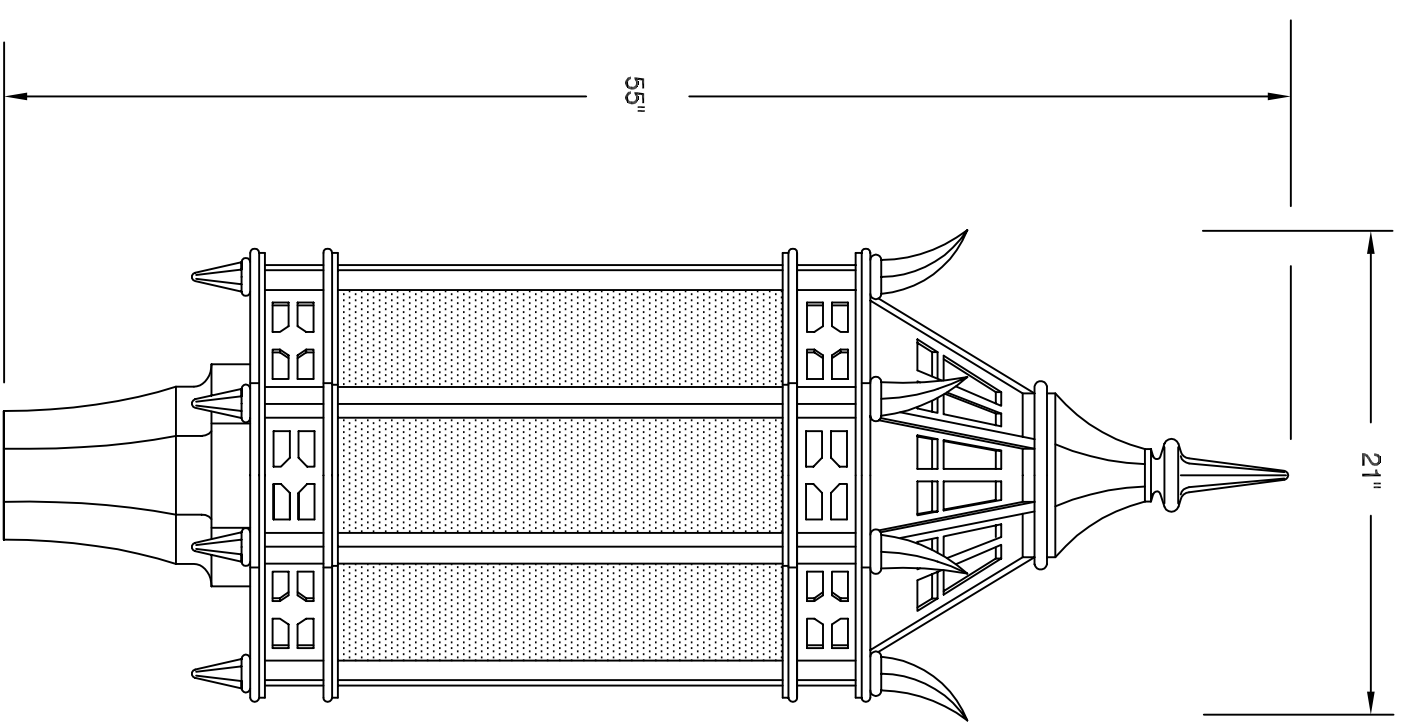
Date January 2005



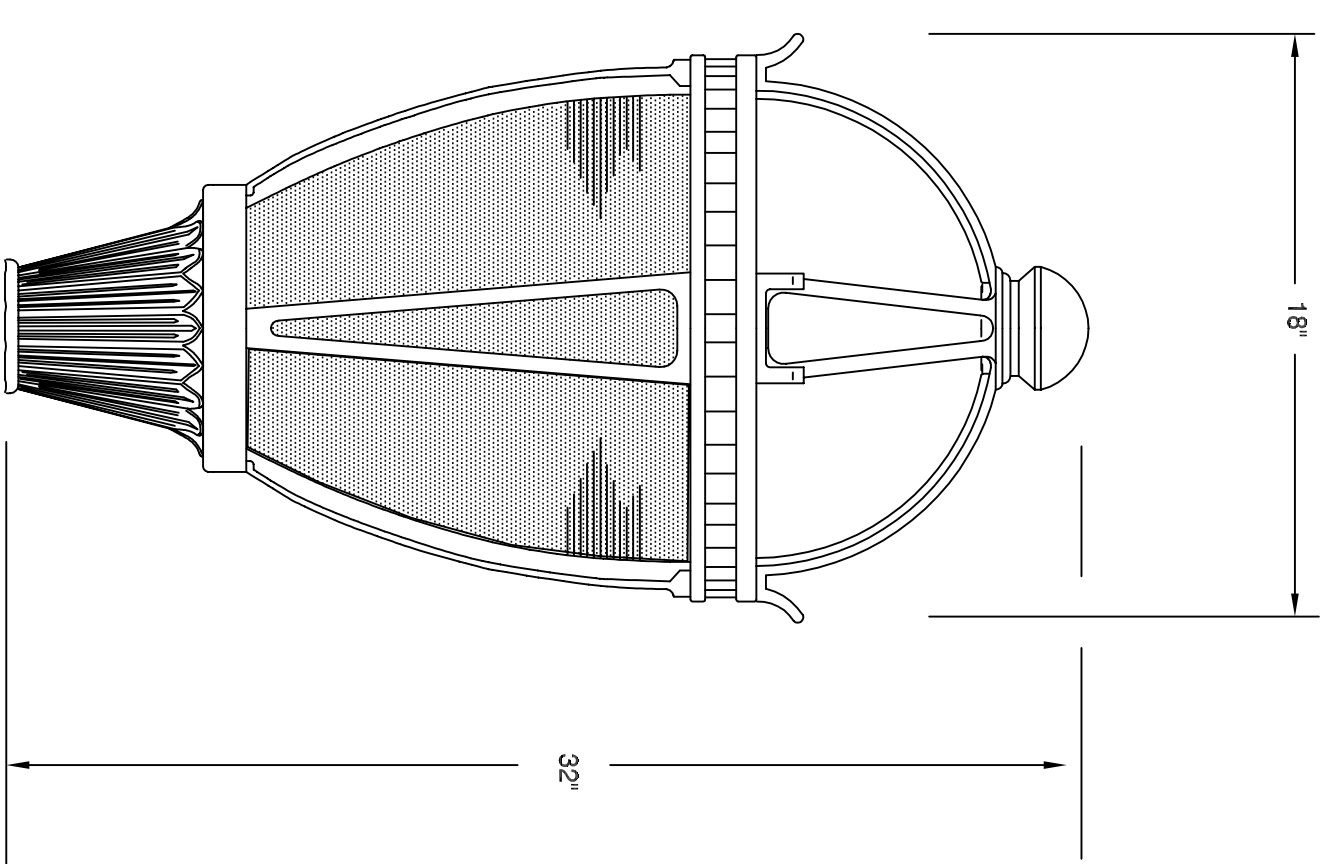
**City of Hartford, Connecticut**  
Department of Public Works  
**Standard Streetscape Details**  
Ornamental Light Poles



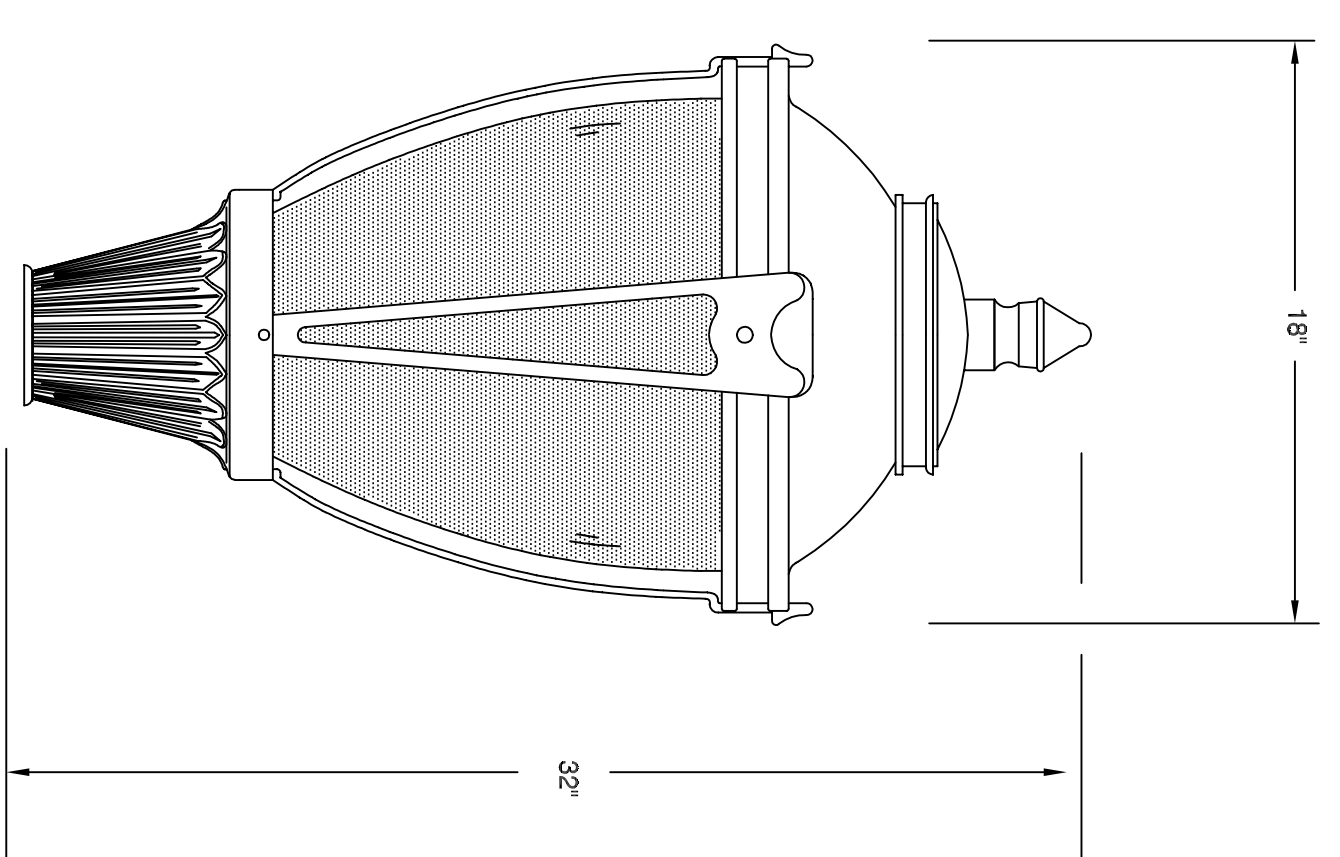
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SS-1.DWG



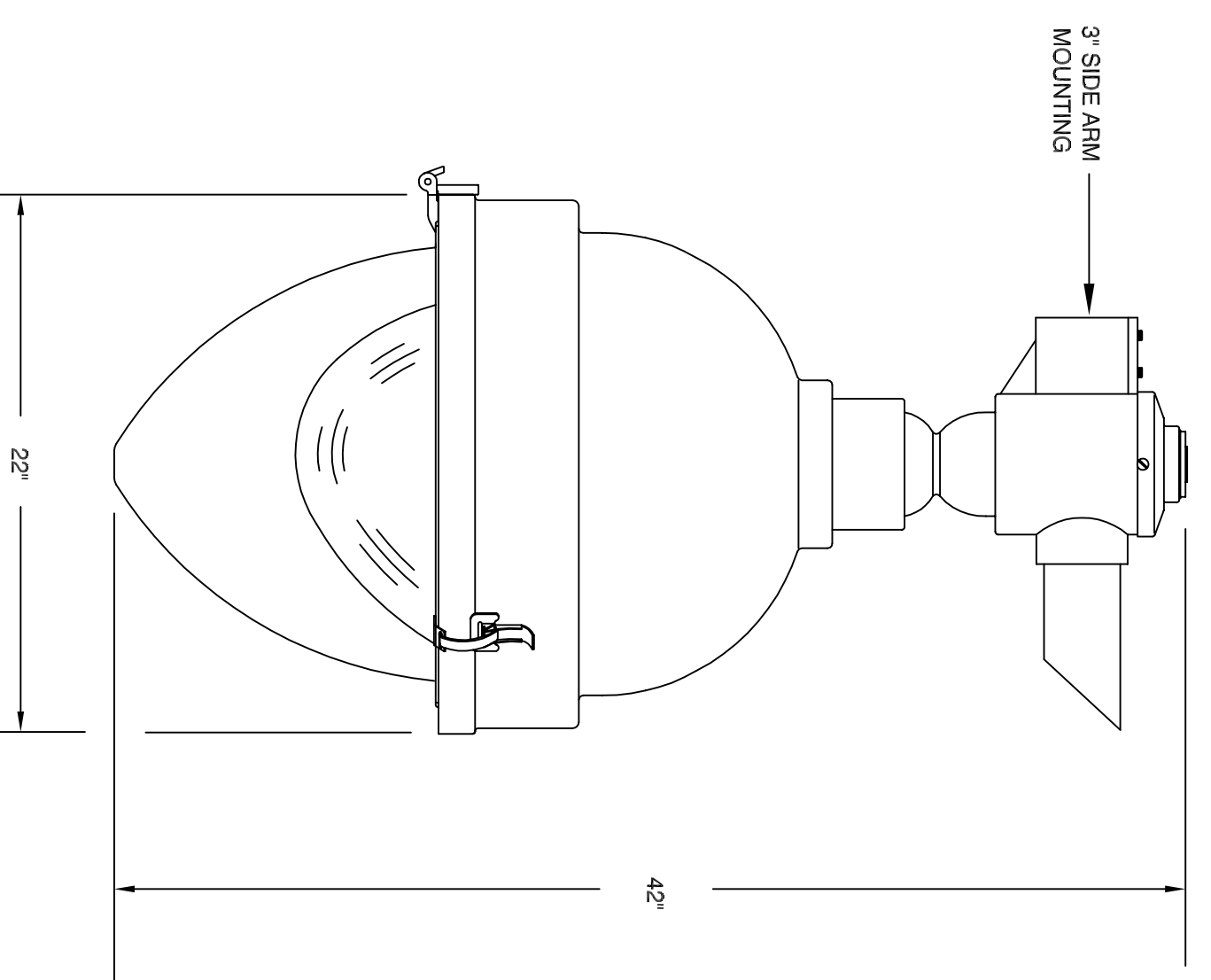
ORNAMENTAL LUMINAIRE  
PARK STYLE



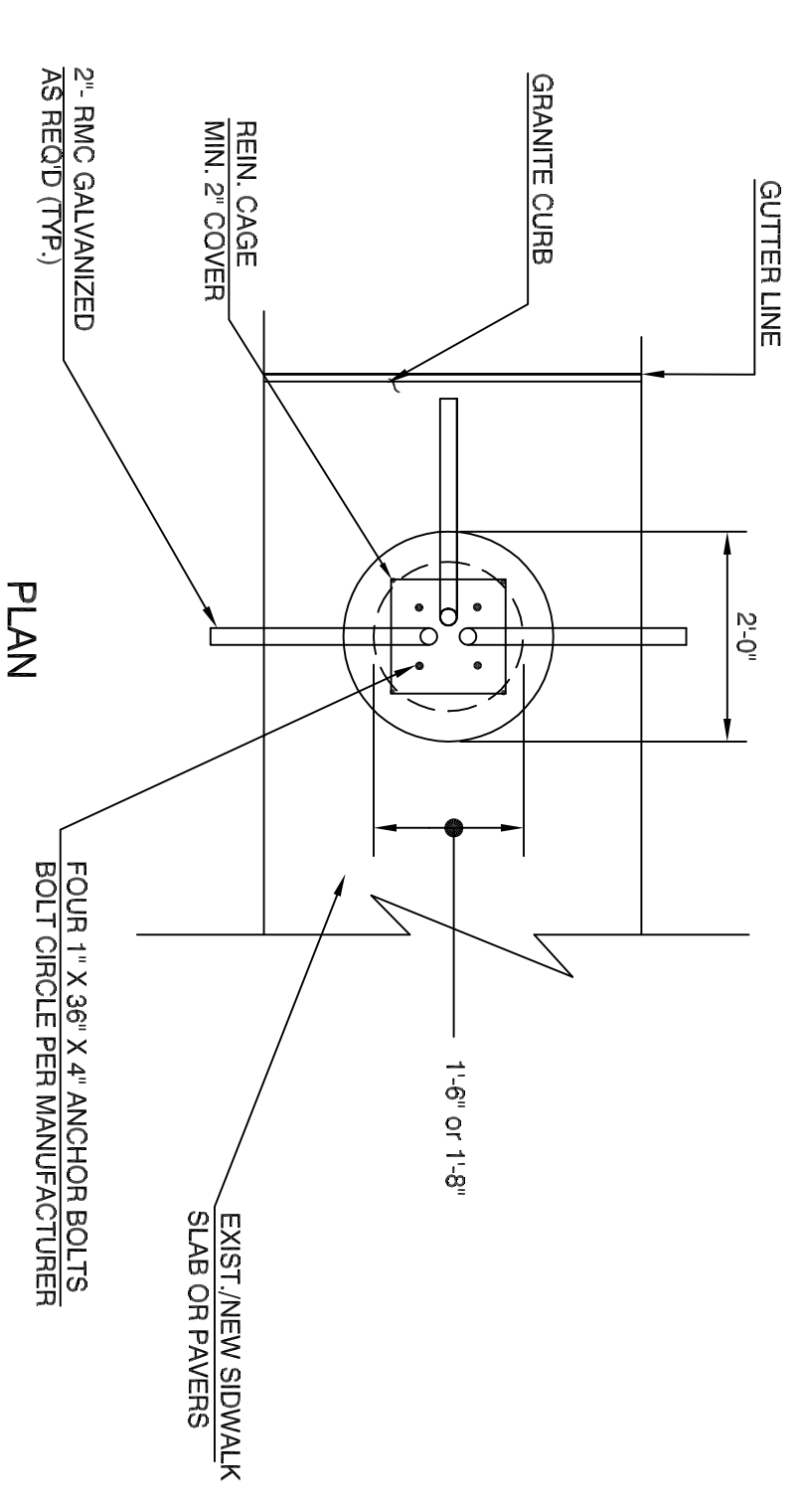
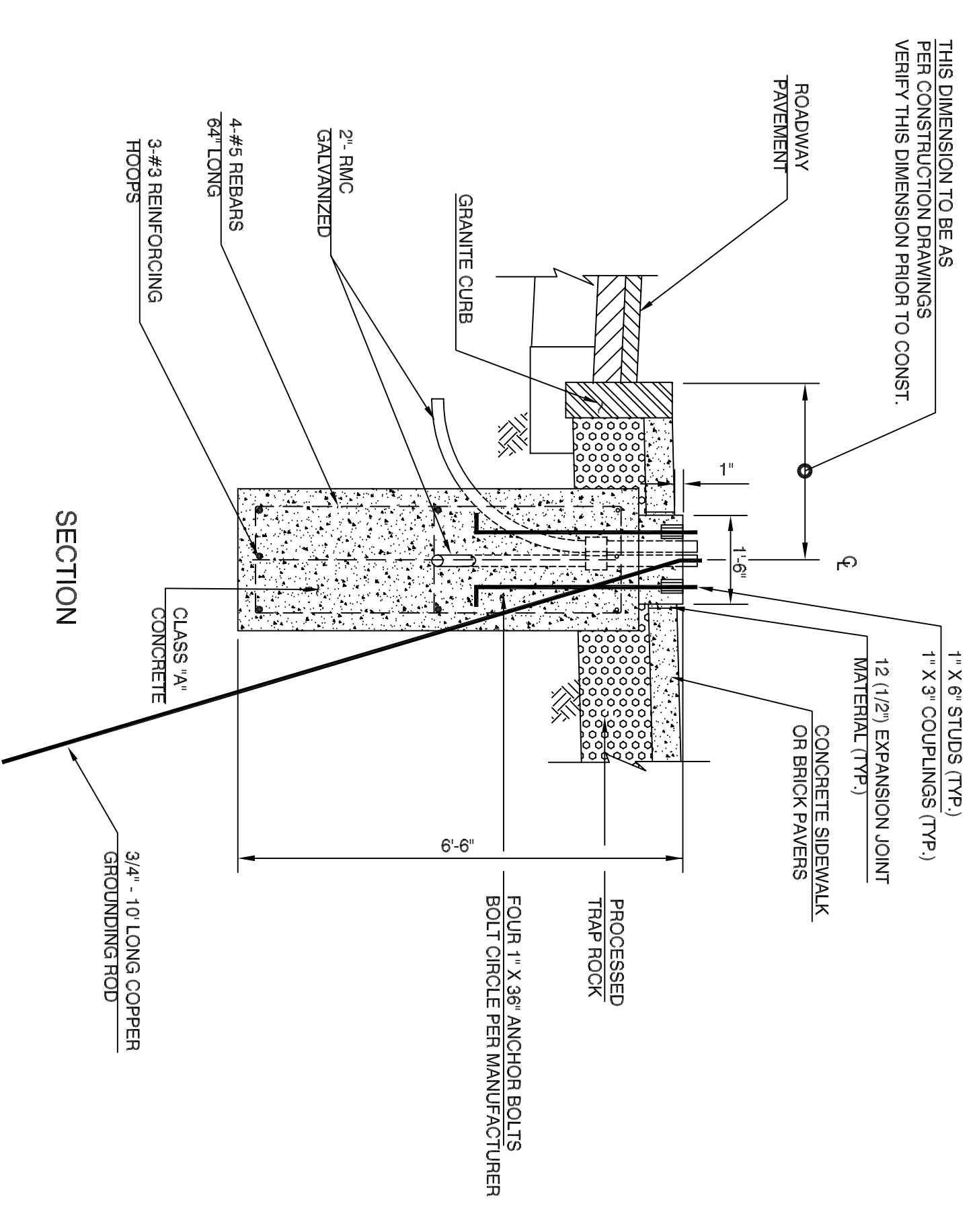
ORNAMENTAL LUMINAIRE  
HARTFORD STYLE



ORNAMENTAL LUMINAIRE  
BATTERY PARK STYLE



ORNAMENTAL  
ROADWAY LUMINAIRE



ORNAMENTAL LIGHT  
POLE FOUNDATION

NOTE:  
1. CONCRETE SHALL BE COMPACTED USING CONCRETE VIBRATOR.  
2. INSTALL POLES PLUMB IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS

Revisions	By	Date

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Standard Drawing No. SS-2

Job No.

Date January 2005

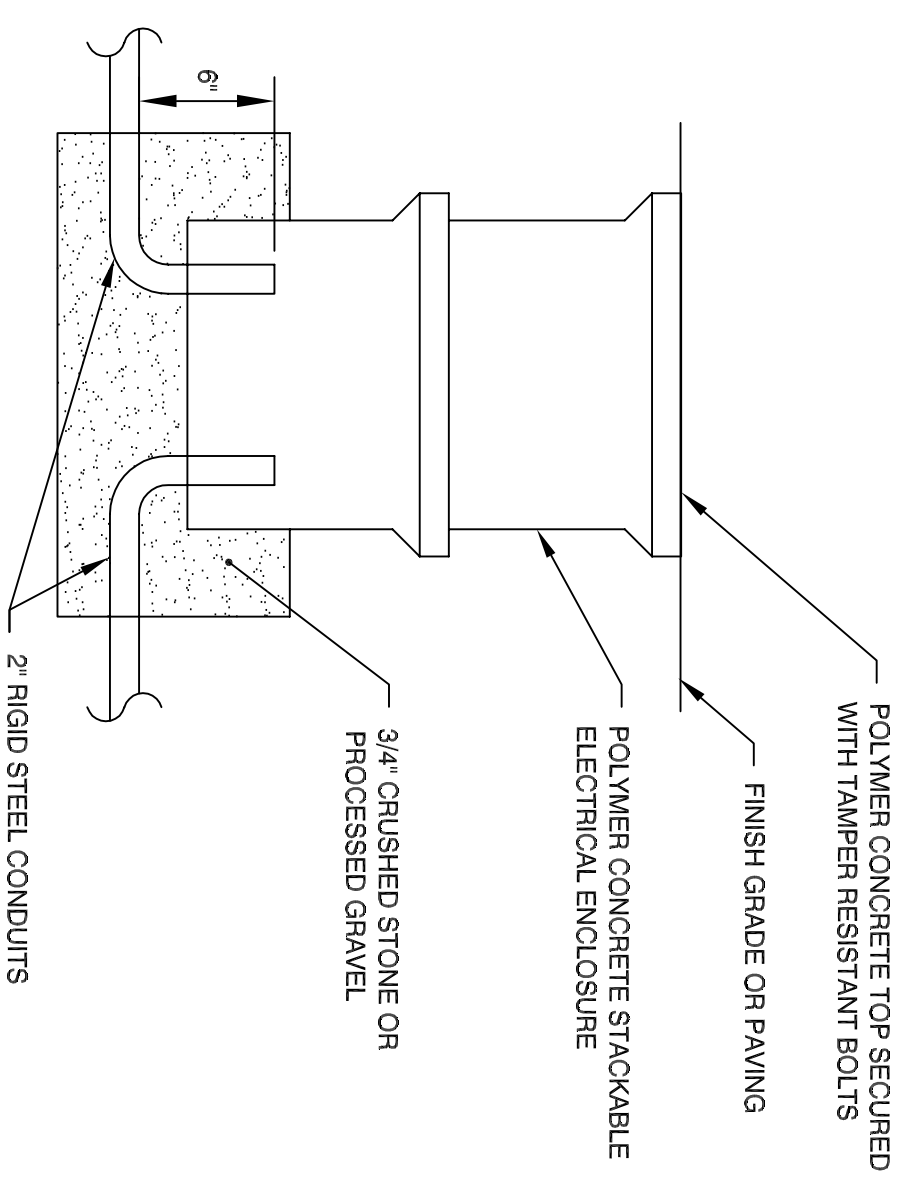


City of Hartford, Connecticut  
Department of Public Works  
Standard Streetscape Details  
Ornamental Luminaires and Foundations



Sheet No.  
File Name  
SS-2.DWG

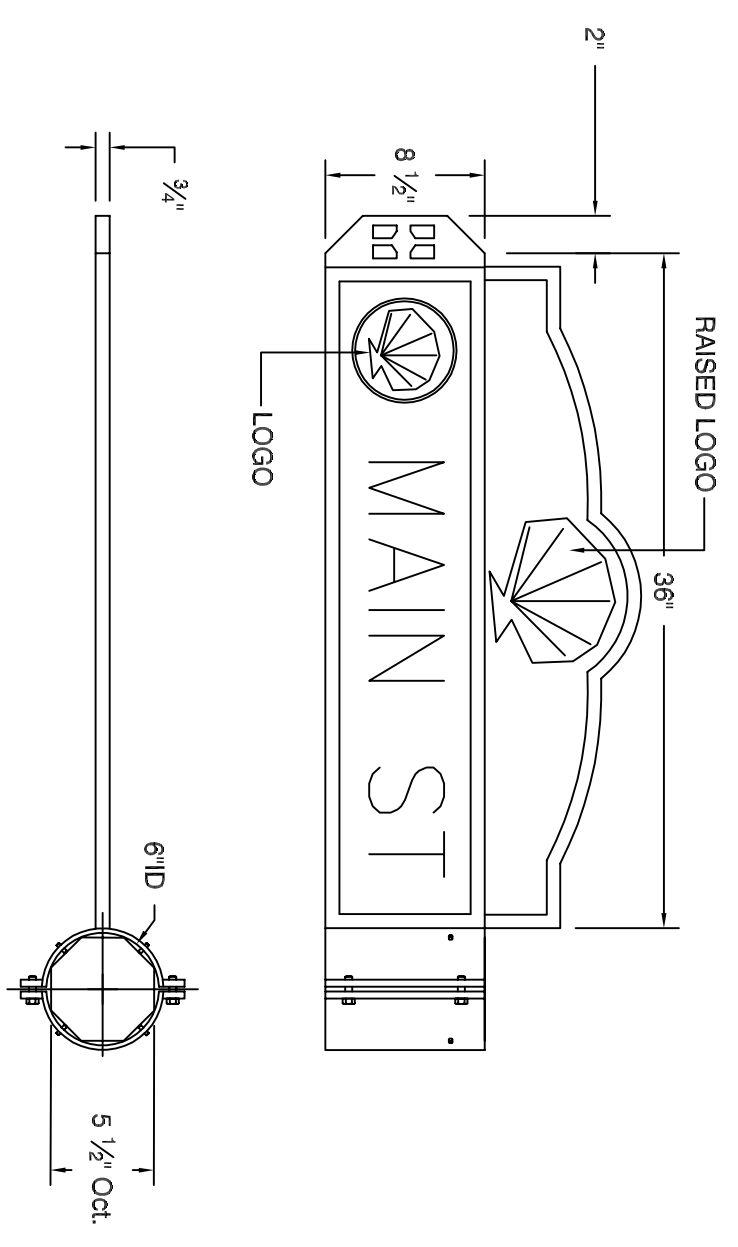




**PULL BOX DETAIL**

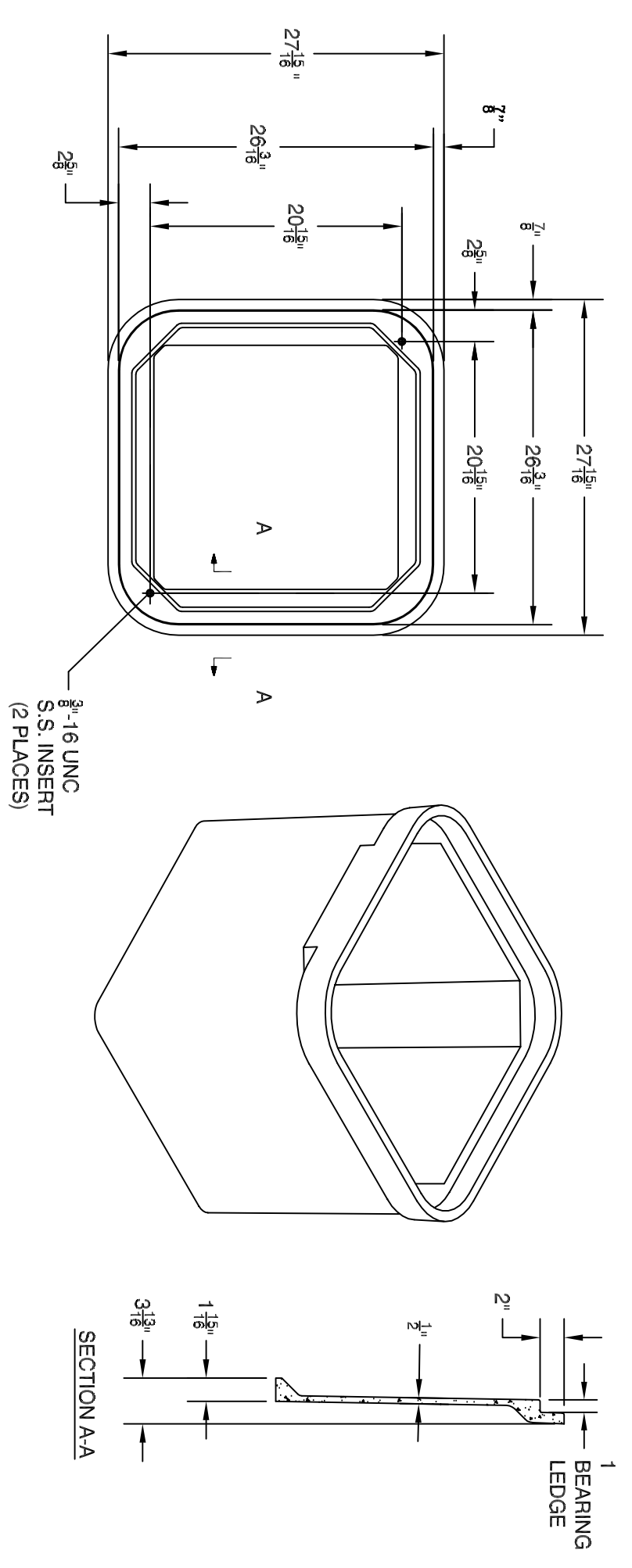
- NOTES:**
- PULLBOXES SHALL BE SET ON A 1/2" BED OF COMPACTED CRUSHED STONE OR PROCESSED GRAVEL. BED SHALL EXTEND 6" BEYOND EACH WALL (i.e. 13"x24" BOX PAD SHALL BE 25"x25"). THE EXTERIOR OF THE BOTTOM BOX SHALL BE BACKFILLED WITH 1/2" OF COMPACTED BED MATERIAL.

- PULLBOXES SHALL BE OPEN BOTTOM TYPE, WITH NOMINAL DIMENSION OF 13"W X 24"L X 18"D WITH A 1/4" BOTTOM EDGE. TOP SHALL BE DESIGNED WITH BOLT HOLES, PULL SLOT AND CUSTOM LOGO. BOX COLOR SHALL BE SELECTED FROM MANUFACTURERS STANDARD COLORS. PULLBOXES SHALL BE UL LISTED (MINIMUM), HAND HOLE COVERS SHALL BE SECURED WITH STAINLESS STEEL FENY/HEAD BOLTS.
- PROVIDE PRODUCT DATA SHEETS, WHICH INDICATE DIMENSIONS, DESIGN INFORMATION, LOAD RATING DATA, MATERIAL INFORMATION, ALONG WITH MANUFACTURERS INFORMATION FOR REVIEW. SUBMIT PRODUCT SAMPLES, IN MANUFACTURERS STANDARD COLORS TO ALLOW FOR COLOR SELECTION. PRODUCT SAMPLES SHALL HAVE NOMINAL DIMENSIONS OF 4"x6".
- WHERE REQUIRED, CONTRACTOR SHALL FIELD DRILL PULLBOXES TO INSTALL CONDUITS FOR LIGHT POLES. AFTER INSTALLATION OF CONDUIT, HOLES SHALL BE SEALED USING MATERIALS AS RECOMMENDED BY THE PULLBOX MANUFACTURER.
- LOGO FOR TOP SHALL BE "ELECTRIC" OR "TRAFFIC" AS APPROPRIATE IN 2" HIGH LETTERS. PROVIDE A FULL SIZE SAMPLE FOR REVIEW.

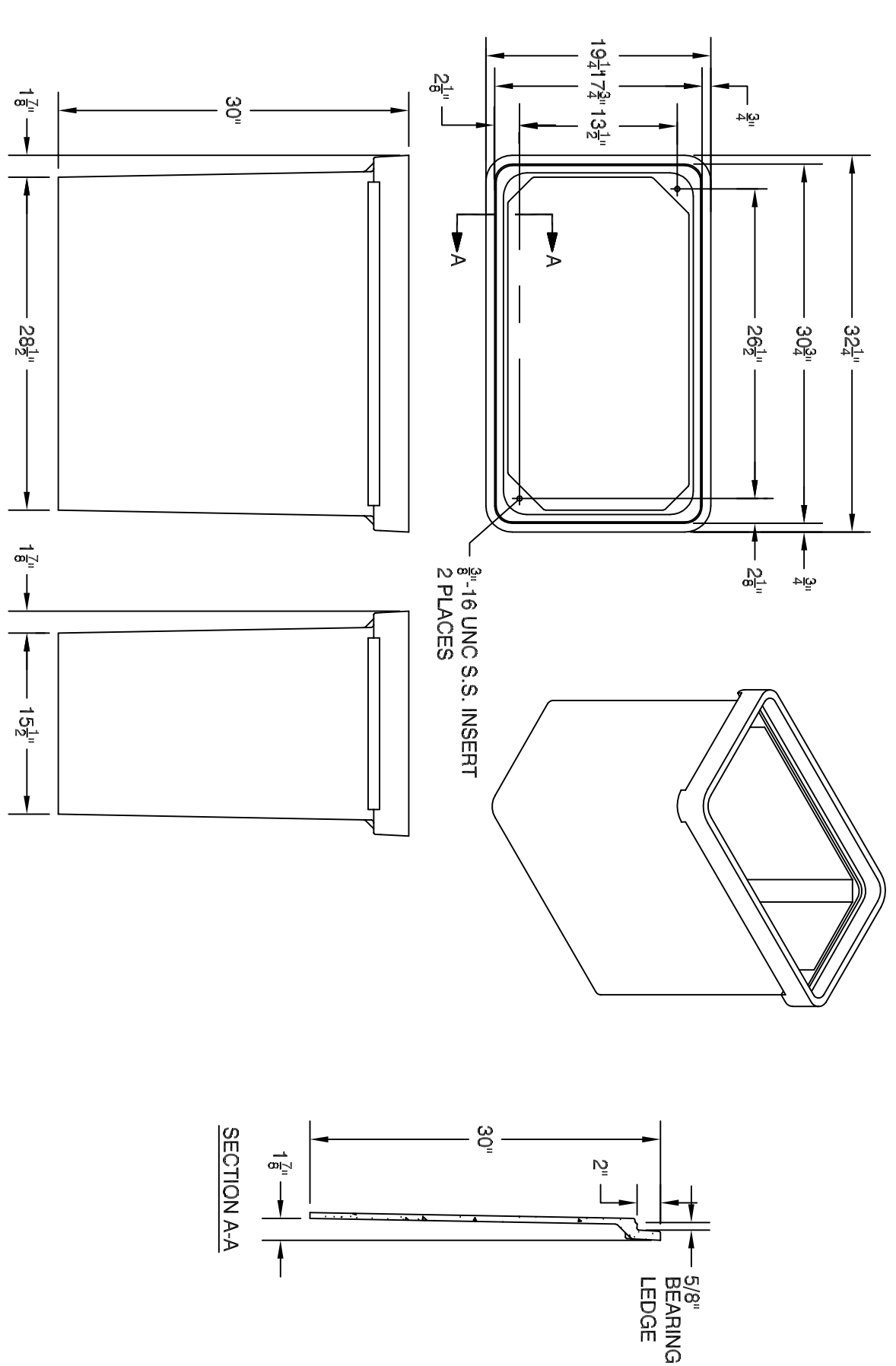
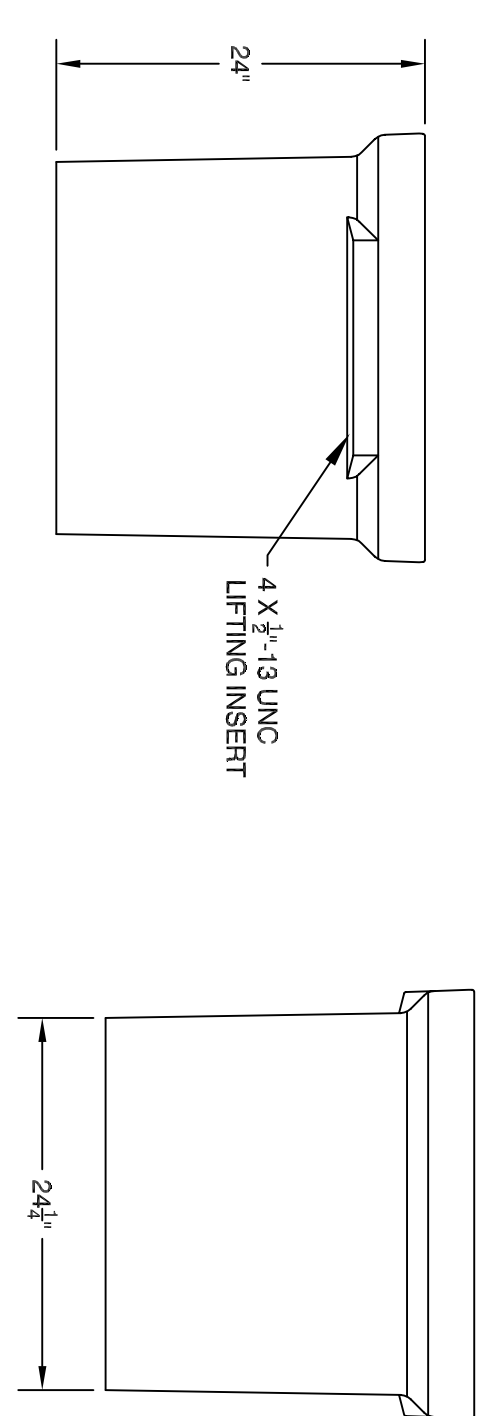


**CLAMP-ON STREET SIGN BRACKET**

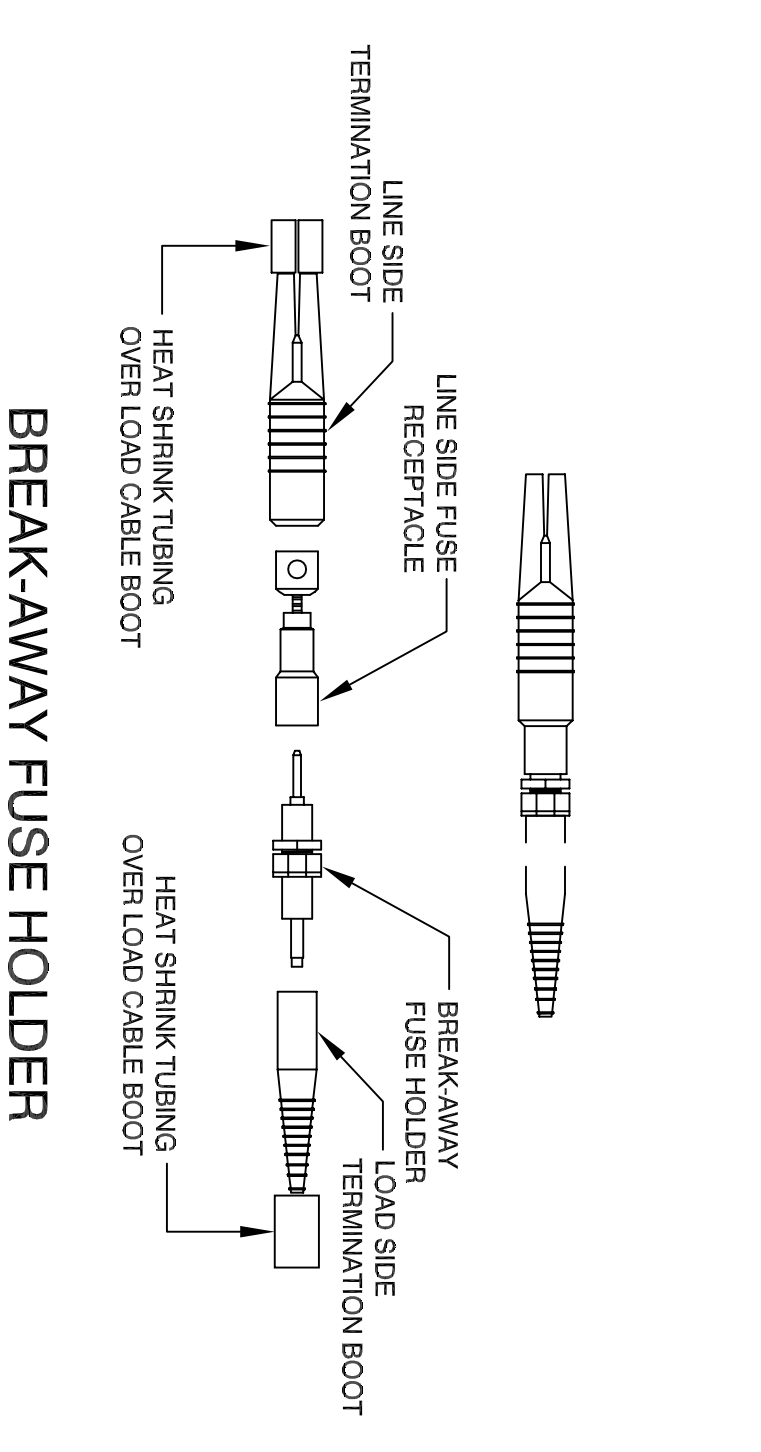
- NOTES:**
- LOGO AND STREET NAME ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE DIMENSIONS WILL PROVIDE SIGN LOGO/COLOR INFORMATION WHEN SHOP DRAWINGS ARE APPROVED.



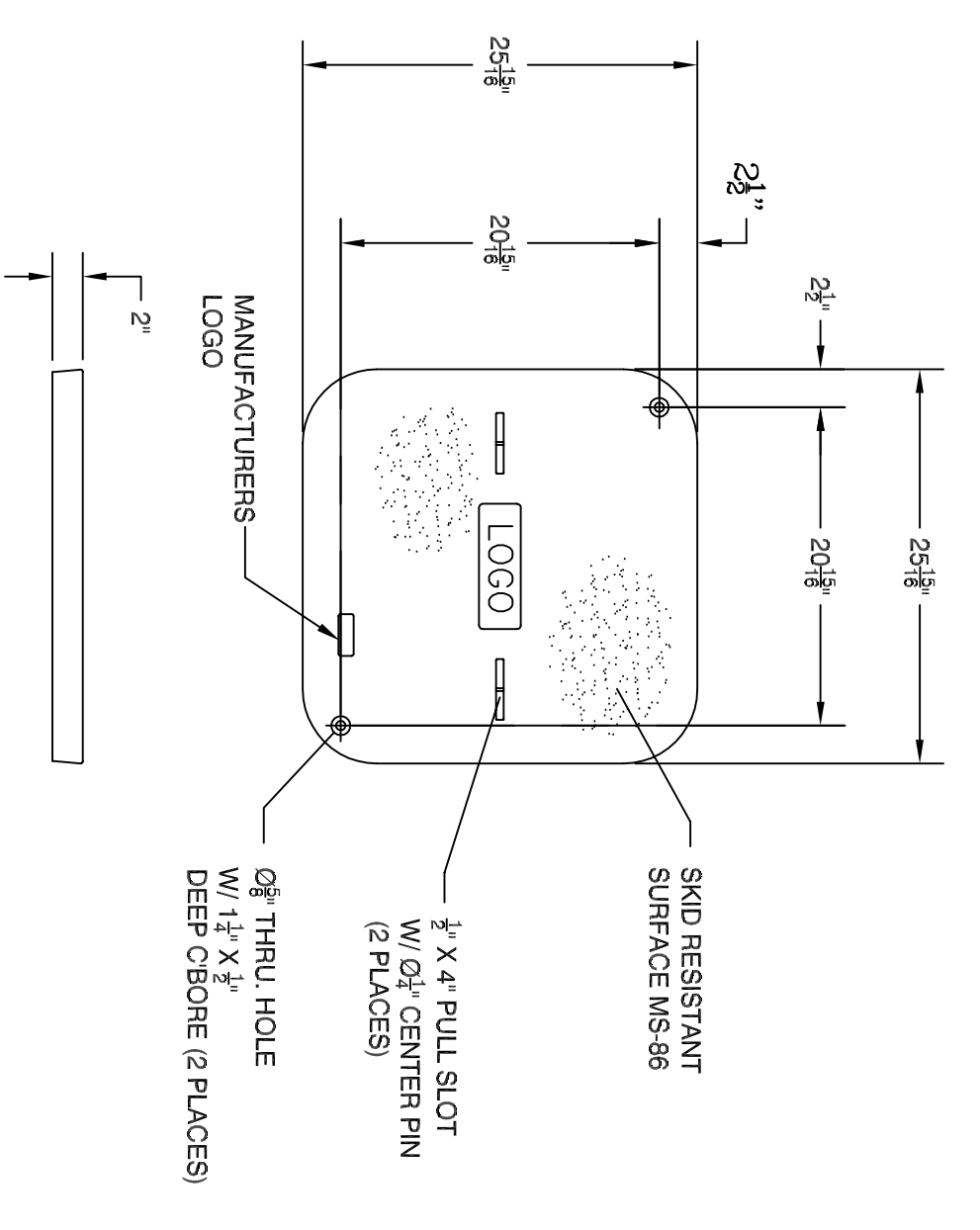
**POLYMER PULL BOX - TYPE I**



**POLYMER PULL BOX - TYPE II**

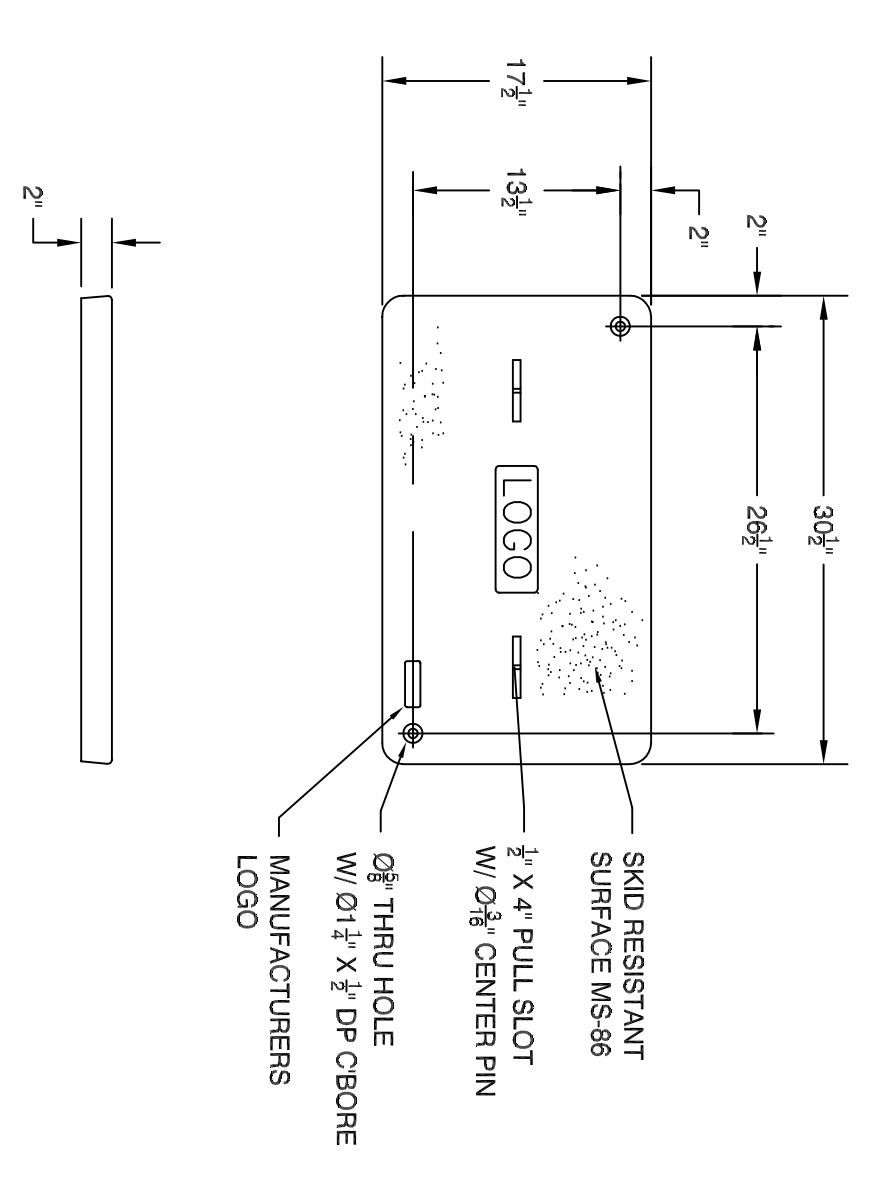


**BREAK-AWAY FUSE HOLDER**



**COVER FOR POLYMER PULL BOX - TYPE I**

- NOTES:**
- COVER SHALL BE RATED FOR A STATIC HS-20 DESIGN LOAD.
  - FURNISH 1/1(2) 3/8\" - 16 UNC X 2 1/2\" LONG HEX HEAD BOLTS, AND (2) 3/8\" WASHERS.



**COVER FOR POLYMER PULL BOX - TYPE II**

- NOTES:**
- COVER SHALL BE RATED FOR A STATIC HS-20 DESIGN LOAD.
  - FURNISH 1/1(2) 3/8\" - 16 UNC X 2 1/2\" LONG HEX HEAD BOLTS, AND (2) 3/8\" WASHERS.

Revisions	By	Date

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Standard Drawing No. SS-3

Job No.

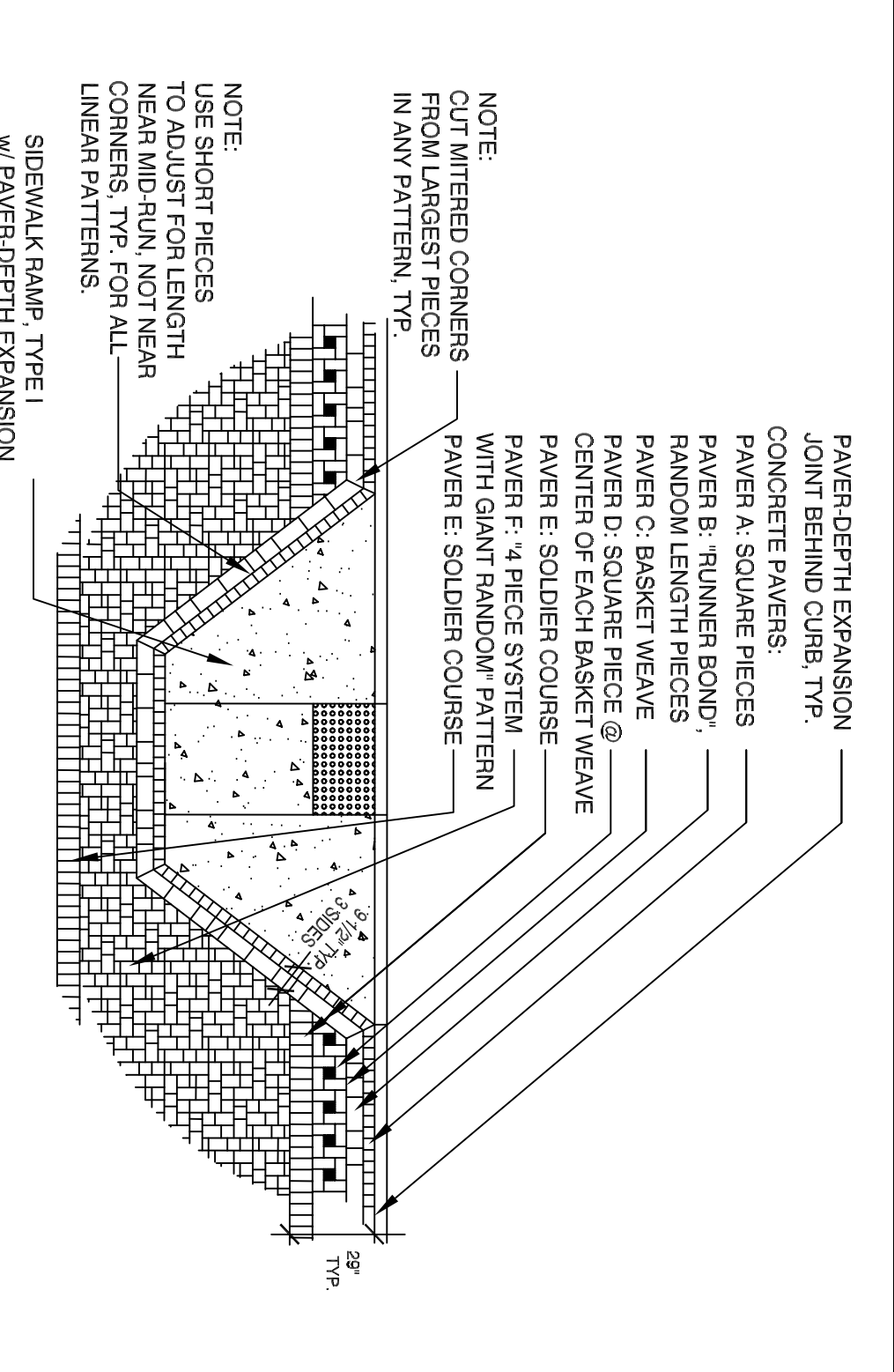
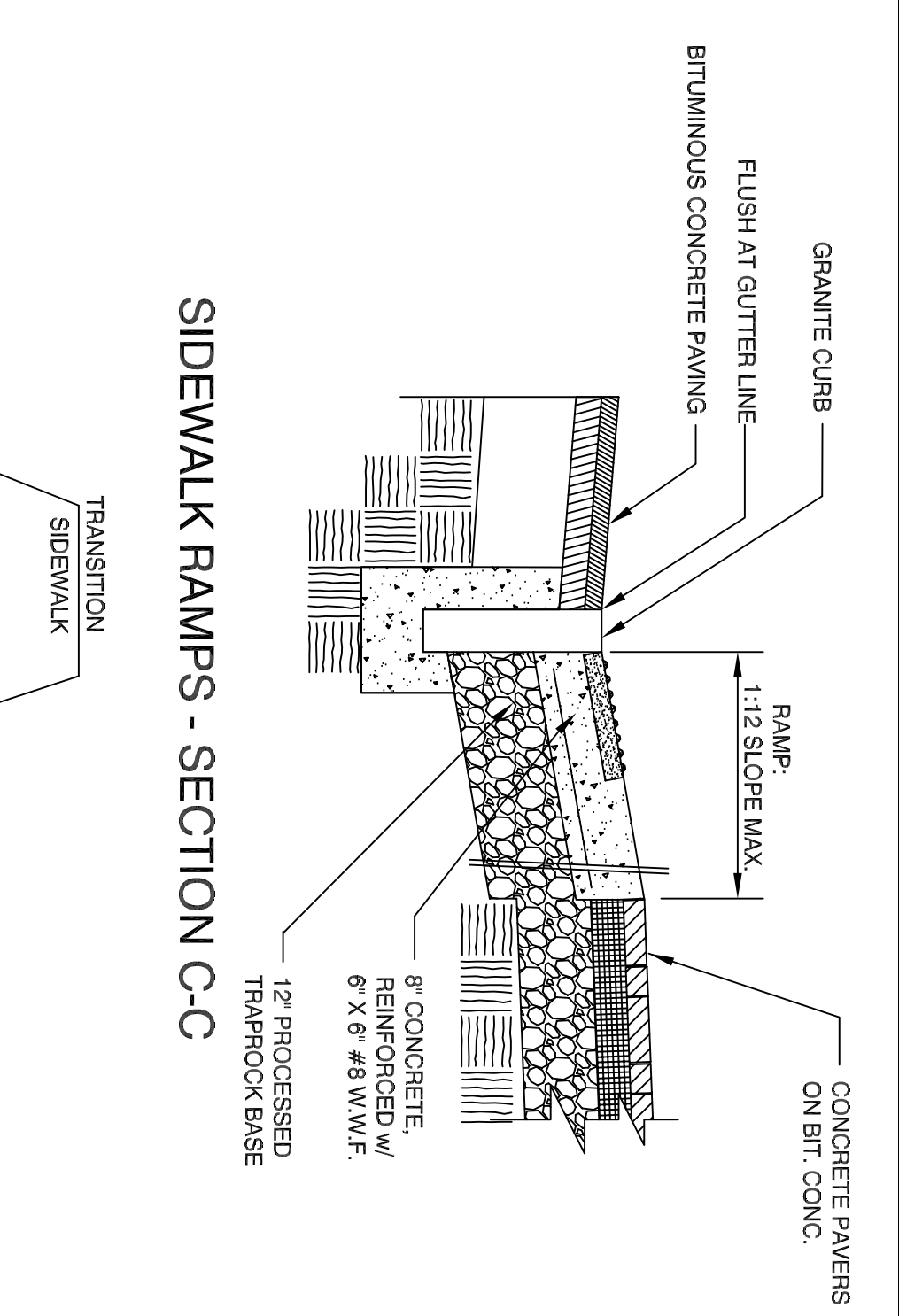
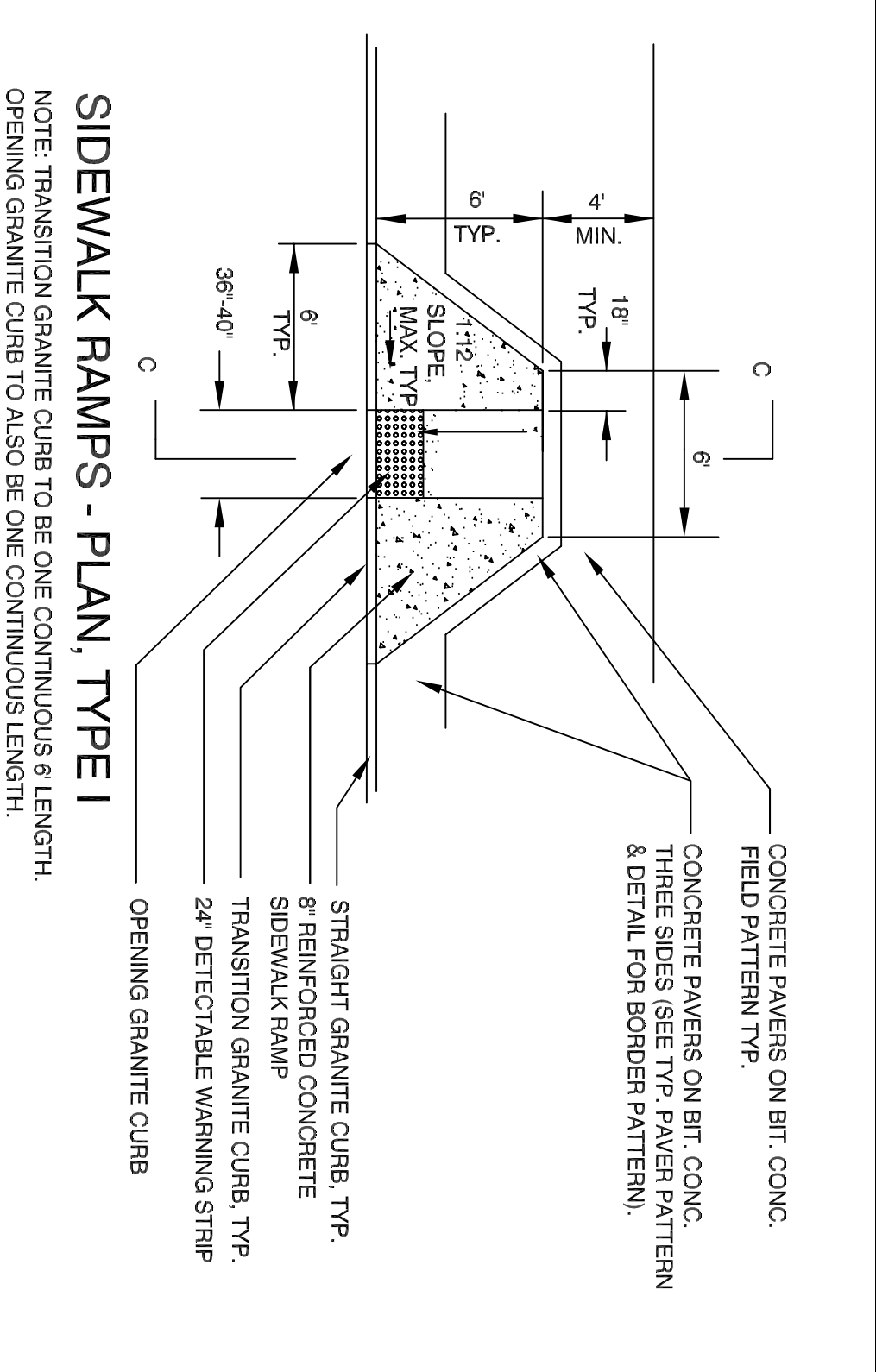
Date January 2005



**City of Hartford, Connecticut**  
 Department of Public Works  
 Standard Streetscape Details  
 Pullboxes and Street Signage



Sheet No.  
 File Name  
 SS-3-DWG



**CONCRETE PAVER DESCRIPTIONS:**  
 NOTE: PAVEMENT NAMES, DESCRIPTIONS, AND SPECIAL PATTERNS (BOLD TYPE) ARE BASED ON PAVEMENT PRODUCT DESCRIPTIONS.

**PAVER A:** HALF-HOLLAND STONE, HERITAGE SERIES (TUMBLE TEXTURE); 2.38" x 3.78" x 3.78"

**PAVER B:** ADIRONDACK, STANDARD SERIES (NON-TUMBLE TEXTURE); 2.98" THICK PAVERS, A MIXTURE OF APPROXIMATELY SEVEN EIGHTHS SMALL (5/12" x 4.5/8"), MEDIUM (5/12" x 6.5/8"), AND LARGE (6 1/2" x 7.3/4") RECTANGLES, AND ONE EIGHTH EXTRA LARGE (5 1/2" x 9.3/8") RECTANGLES. ARRANGE PAVERS IN A RANDOM, RUNNER BOND PATTERN, WITH ALL CORNER CUTS MADE FROM EXTRA LARGE RECTANGLES.

**PAVER C:** HOLLAND STONE, HERITAGE SERIES (TUMBLE TEXTURE); 2.38" x 3.78" x 7.3/4"; FOUR PIECES EACH LOCATION BASKET WEAVE PATTERN.

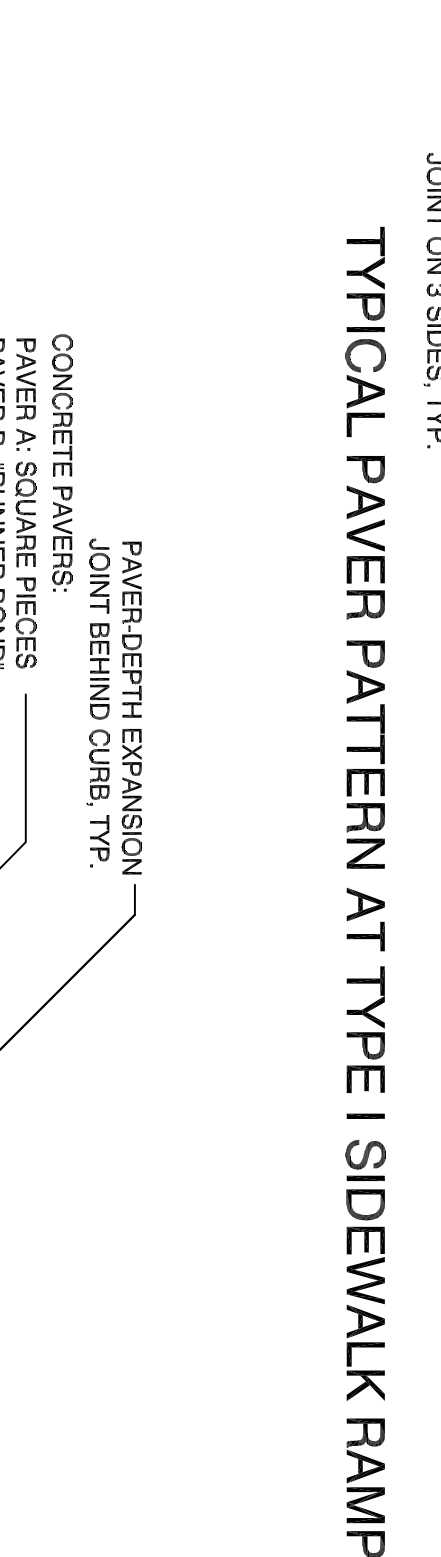
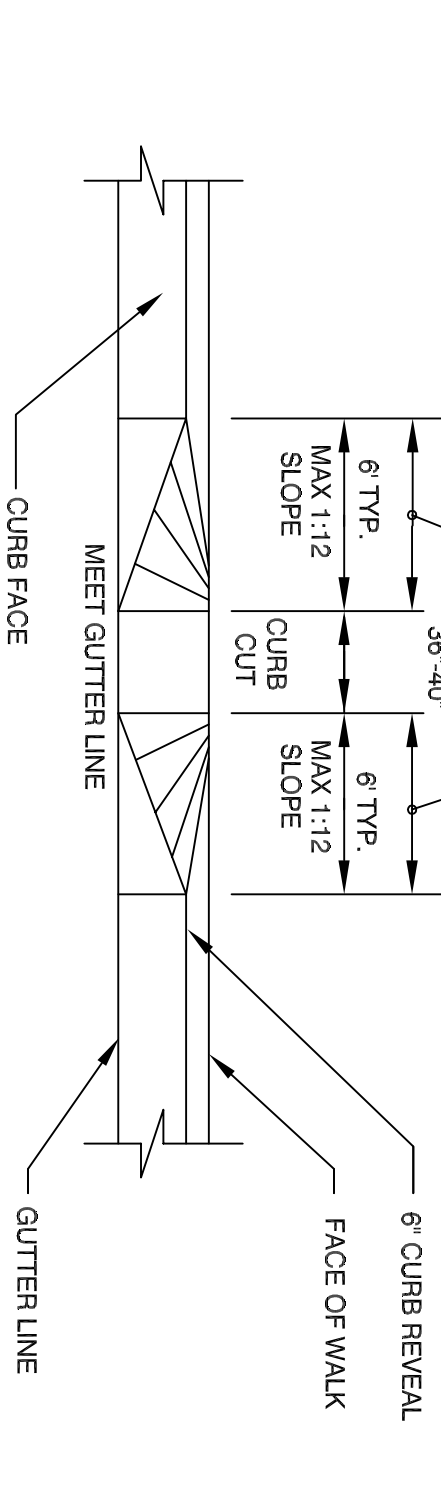
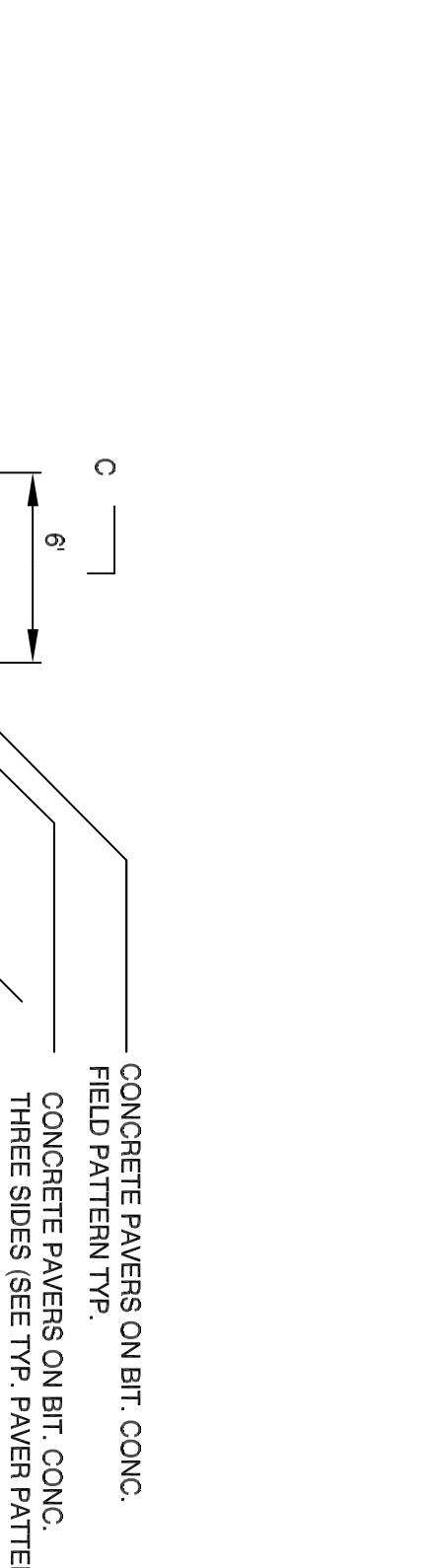
**PAVER D:** HALF-HOLLAND STONE, HERITAGE SERIES (TUMBLE TEXTURE); 2.38" x 3.78" x 3.78" AT CENTER OF EACH PAVEMENT BASKET WEAVE PATTERN LOCATION.

**PAVER E:** HOLLAND STONE, HERITAGE SERIES (TUMBLE TEXTURE); 2.38" x 3.78" x 7.3/4"; IN SOLDIER COURSE PATTERN.

**PAVER F:** ADIRONDACK, HERITAGE SERIES (TUMBLE TEXTURE); 2.98" THICK PAVERS, A PROPORTIONAL MIXTURE OF SMALL (5/12" x 4.5/8"), MEDIUM (5/12" x 6.5/8"), LARGE (5/12" x 7.3/4"), EXTRA LARGE (5 1/2" x 9.3/8"), AND GIANT (9.9/8" x 11.1") RECTANGLES. ARRANGE PAVERS IN A 4 PIECE SYSTEM WITH GIANT RANDOM PATTERN.

**PAVER G:** HOLLAND STONE, HERITAGE SERIES (TUMBLE TEXTURE); 2.38" x 3.78" x 7.3/4"; IN HERRINGBONE PATTERN AT 45 DEGREES TO FLUSH GRANITE HEADER CURB.

**PAVER H:** HOLLAND STONE, HERITAGE SERIES (TUMBLE TEXTURE); 2.38" x 3.78" x 7.3/4"; IN TRIPLE STACKED BOND PATTERN.

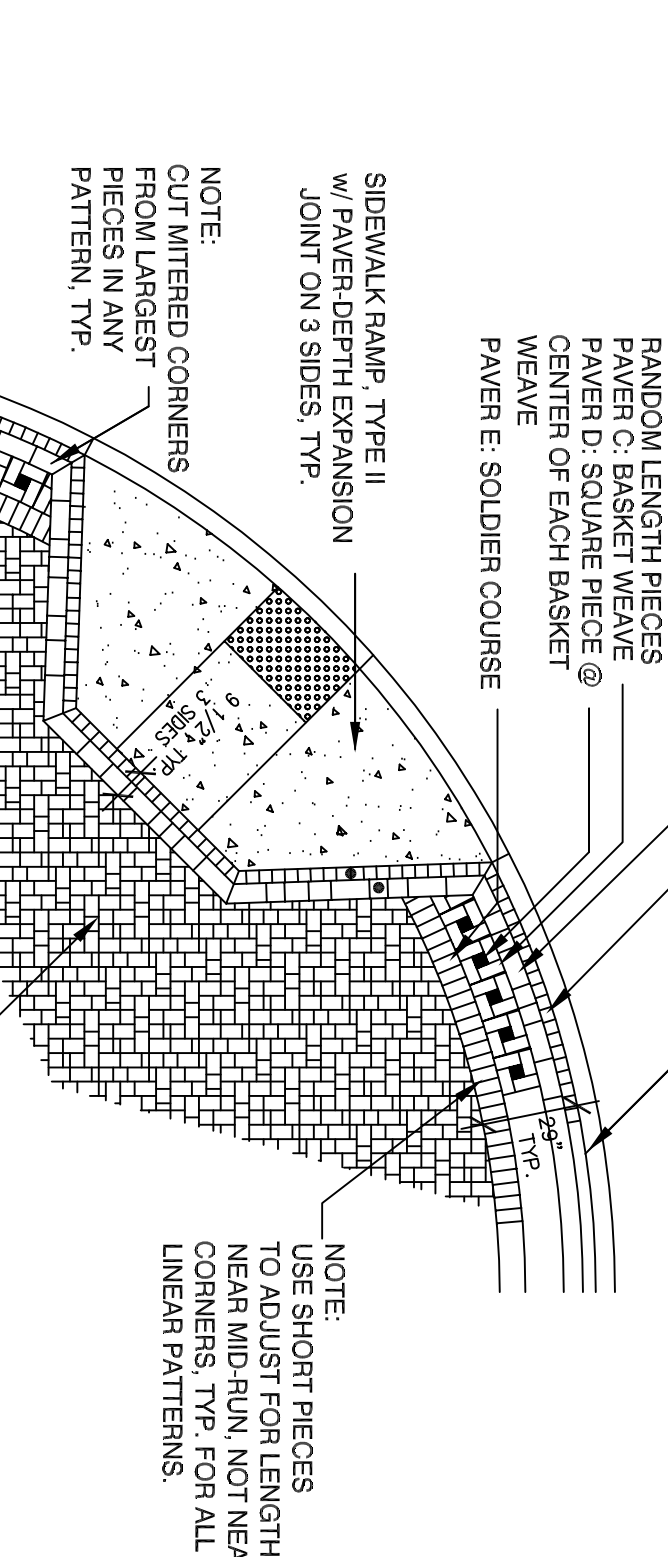
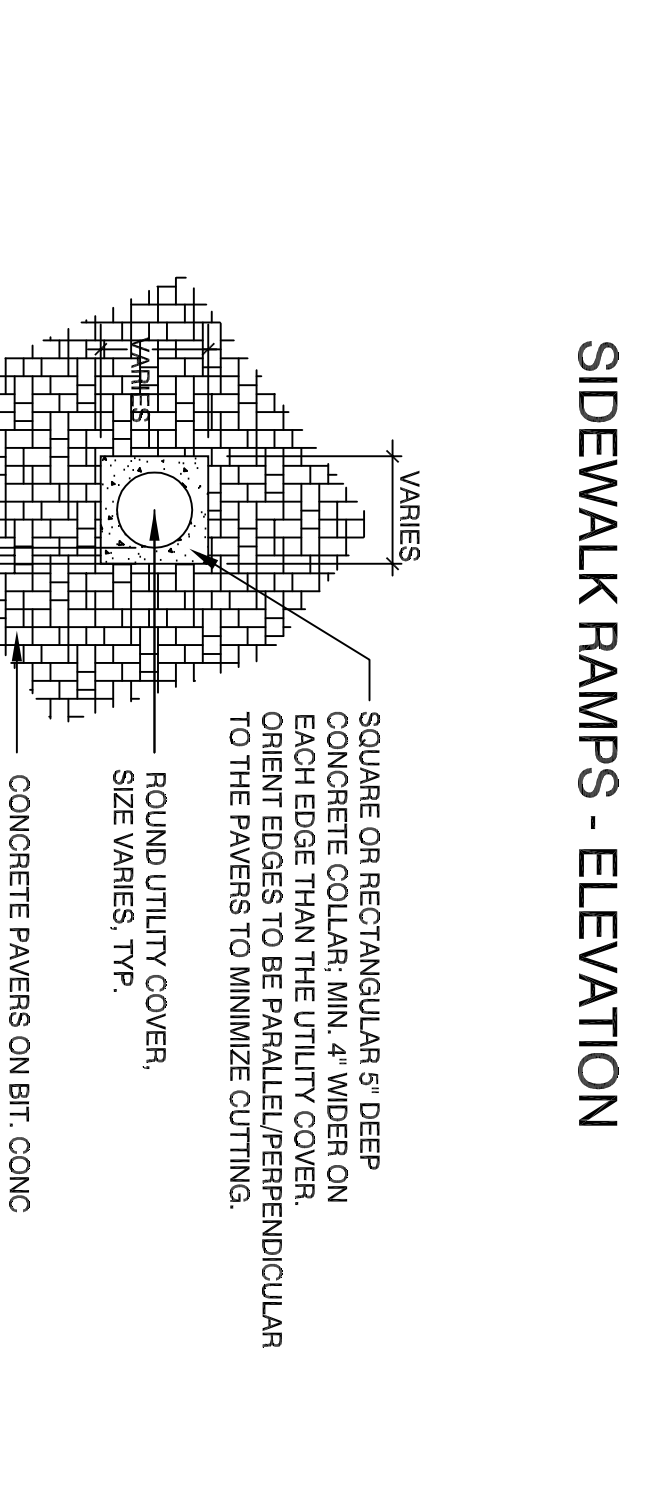
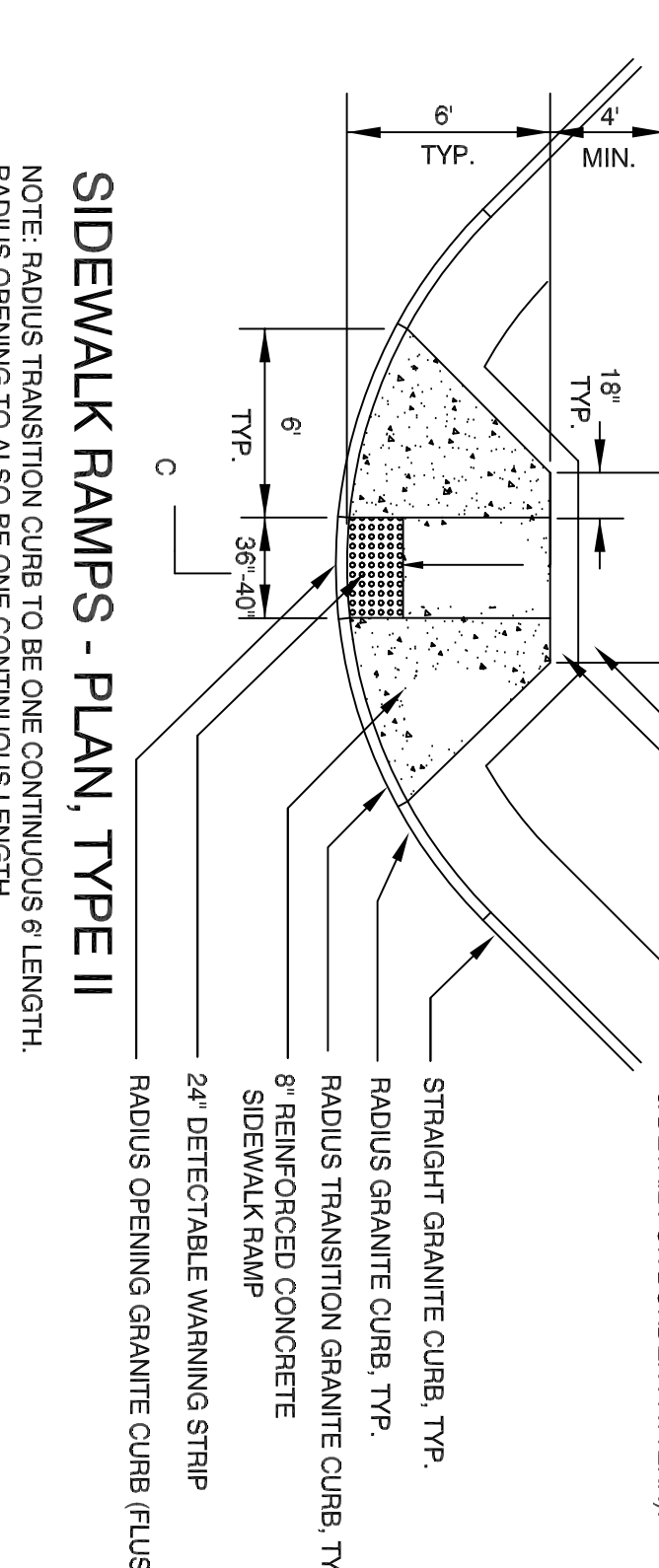


**CONCRETE PAVERS ON 4" CONC. BASE SLAB**

EXPANSION JOINT AGAINST CONC., BUILDINGS & CURBING

FILL JOINTS WITH SAND/CEMENT MIX

2\"/>

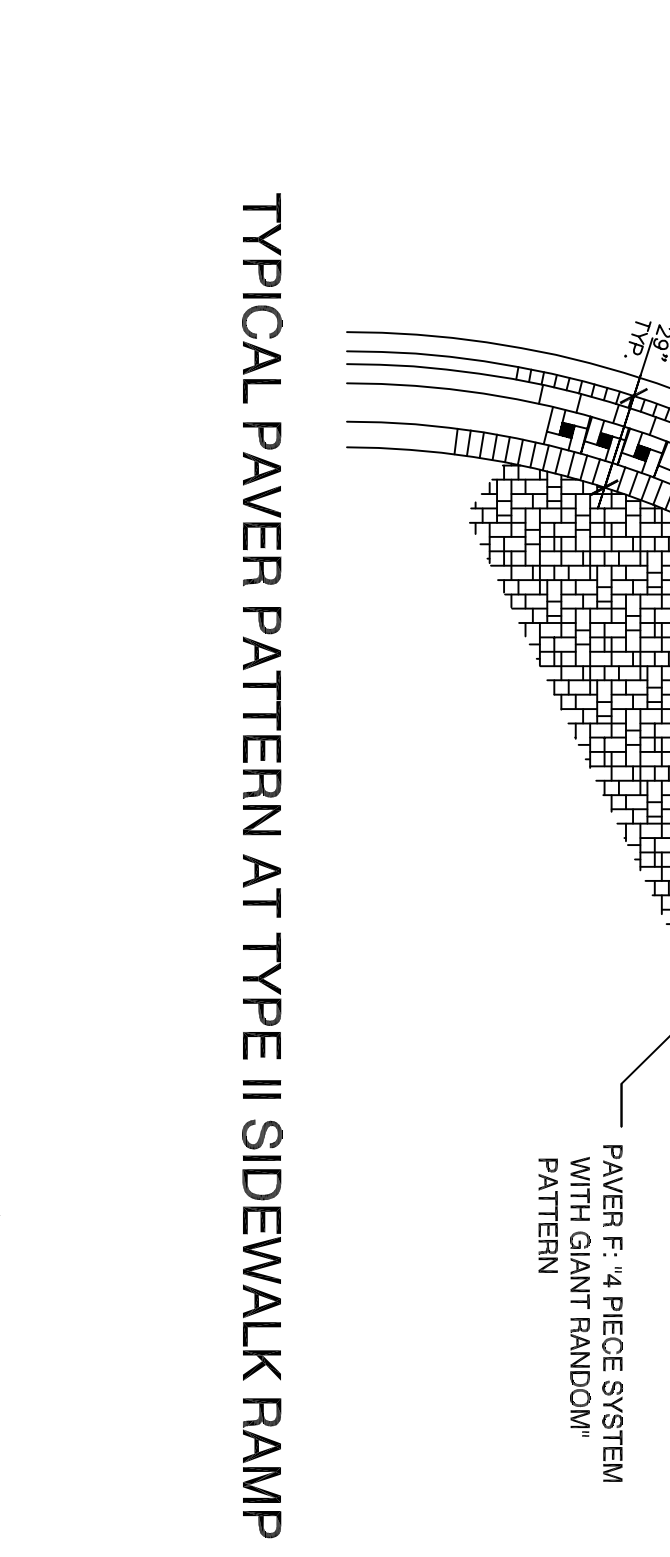
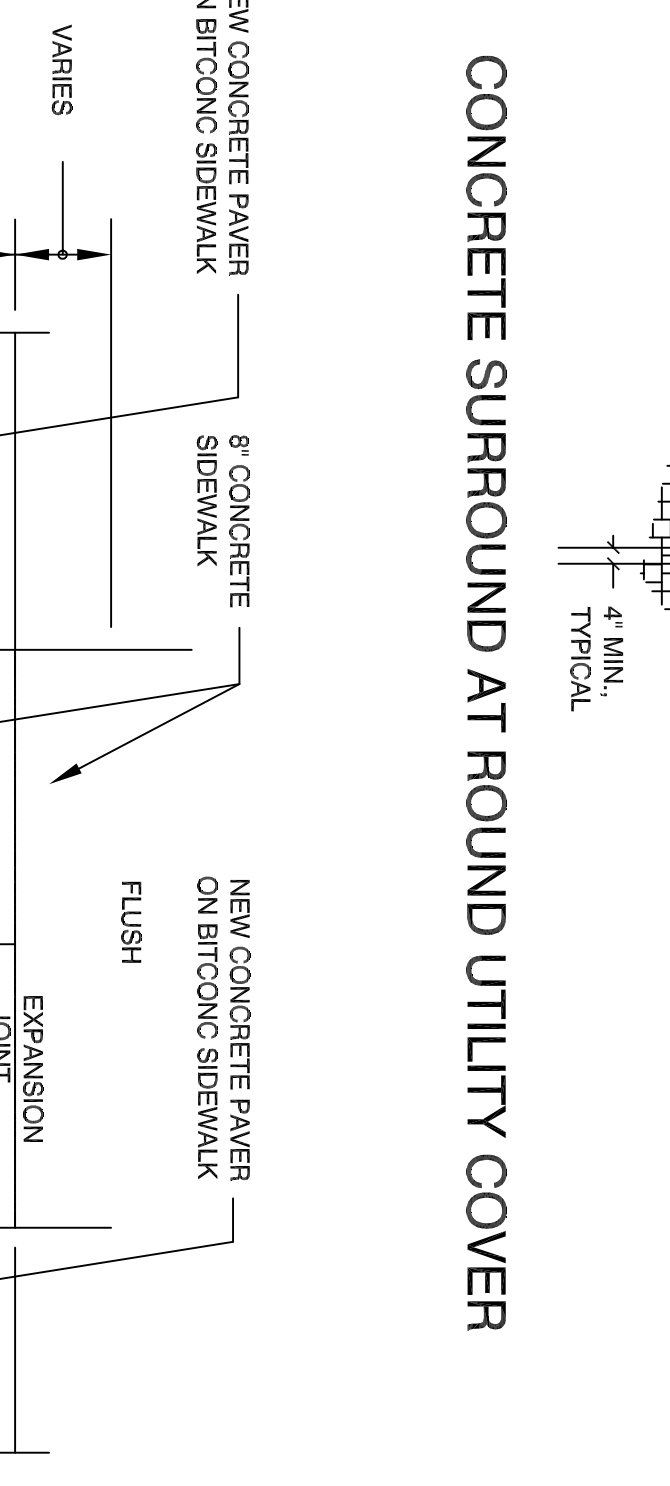
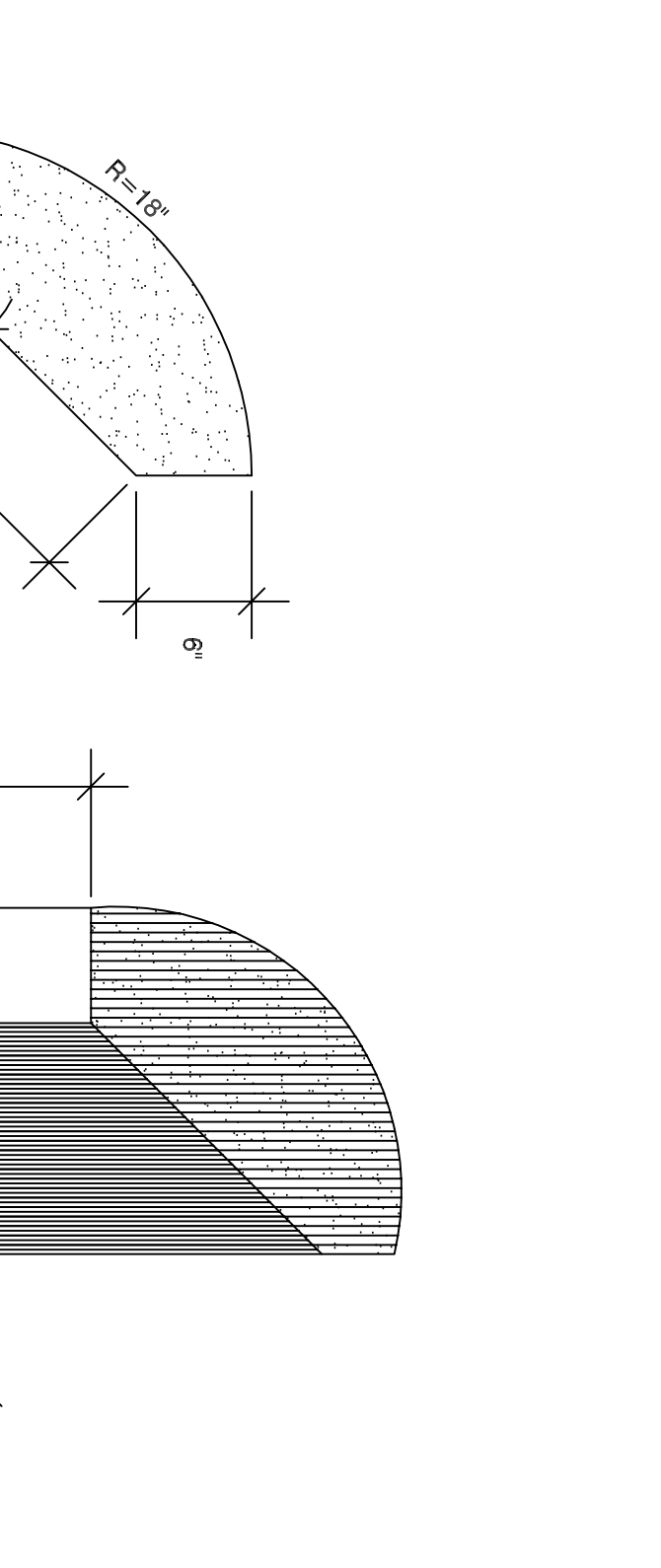


**CONCRETE PAVERS ON 4" CONC. BASE SLAB**

EXPANSION JOINT AGAINST CONC., BUILDINGS & CURBING

FILL JOINTS WITH SAND/CEMENT MIX

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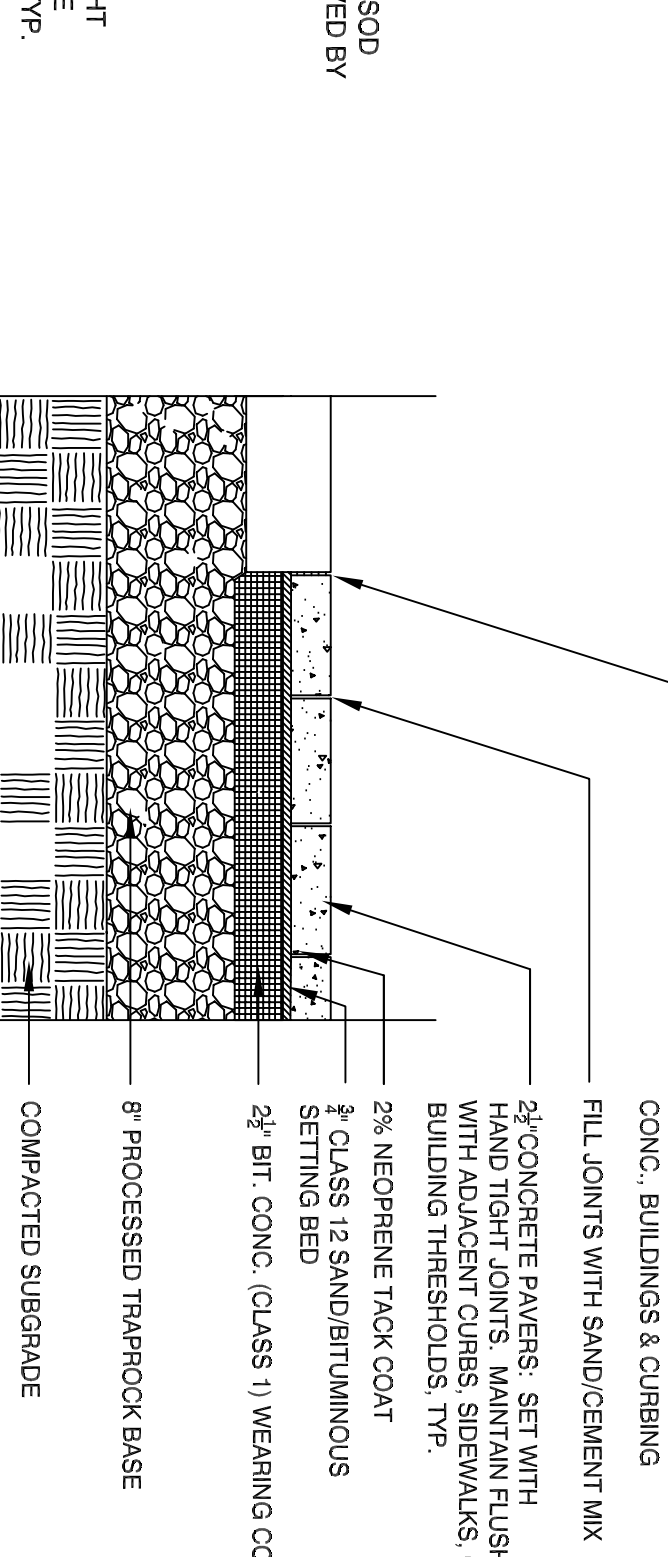
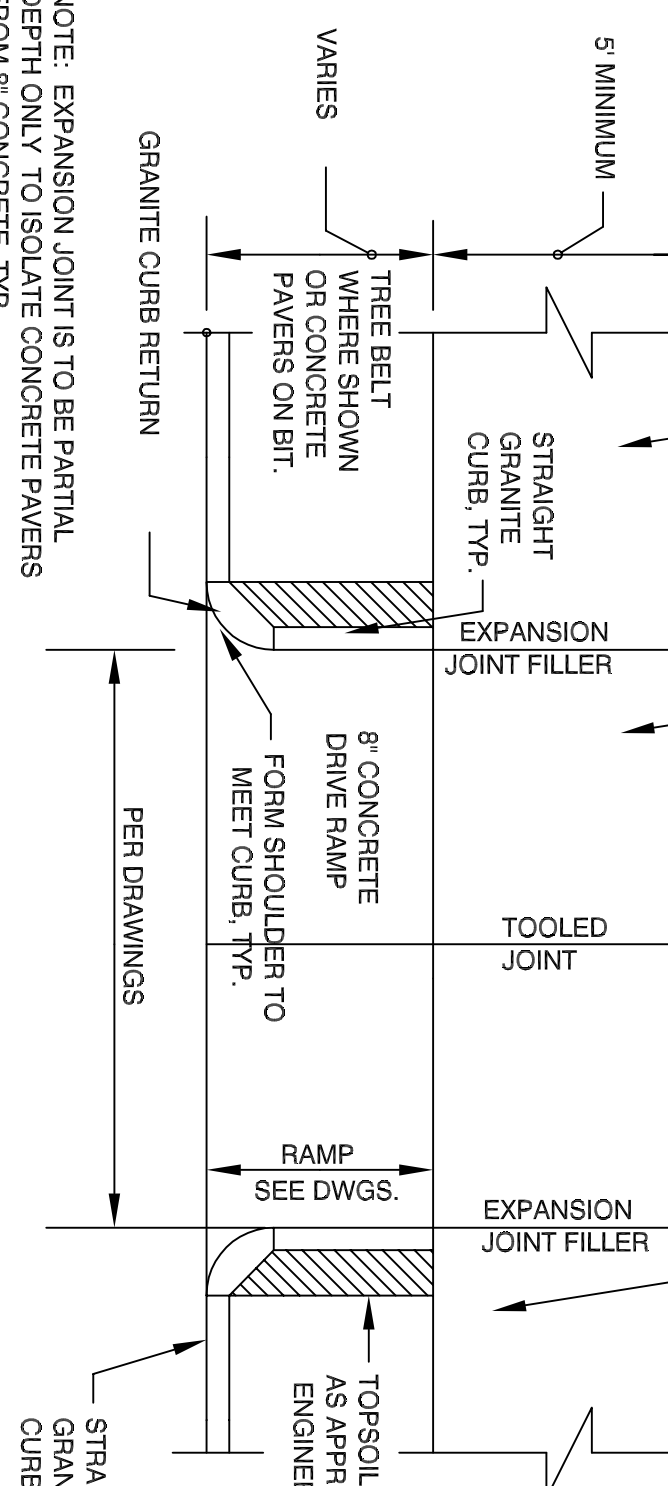
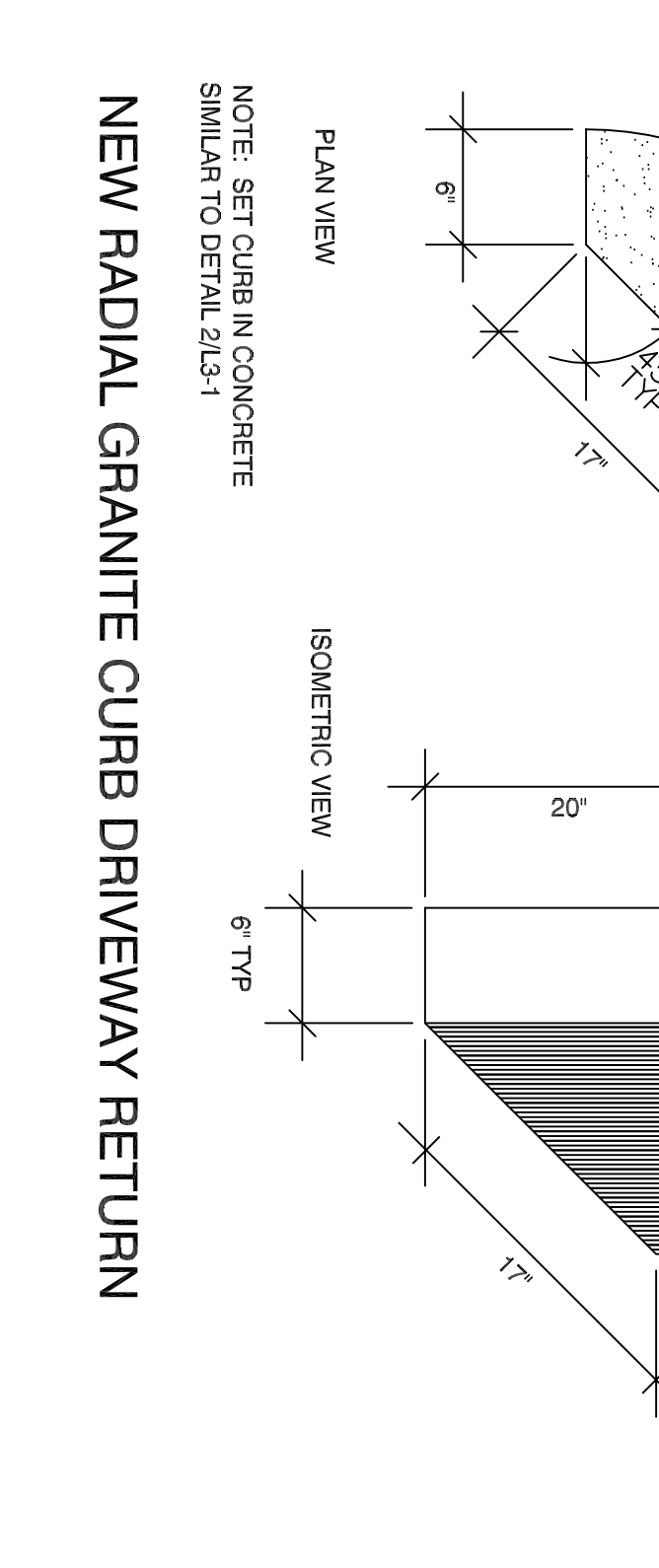


**CONCRETE PAVERS ON 4" CONC. BASE SLAB**

EXPANSION JOINT AGAINST CONC., BUILDINGS & CURBING

FILL JOINTS WITH SAND/CEMENT MIX

2\"/>

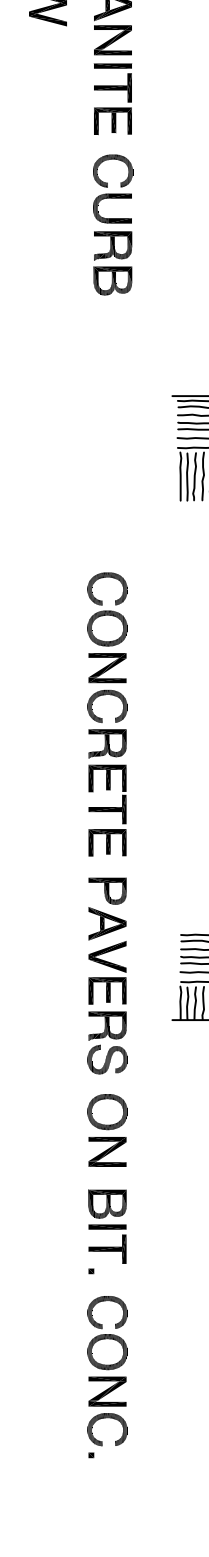
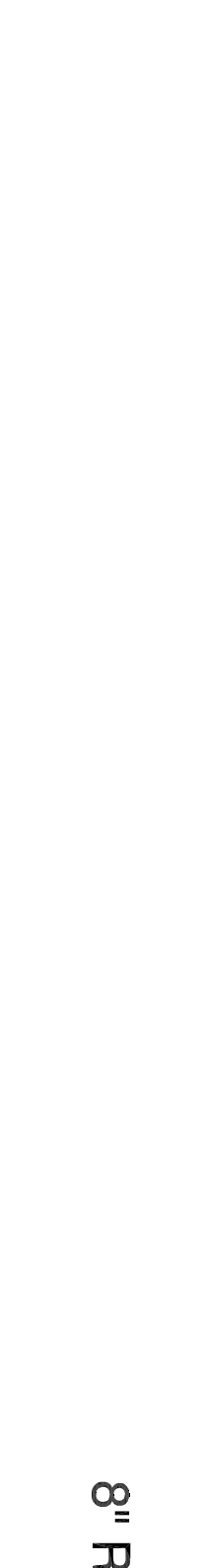


**CONCRETE PAVERS ON 4" CONC. BASE SLAB**

EXPANSION JOINT AGAINST CONC., BUILDINGS & CURBING

FILL JOINTS WITH SAND/CEMENT MIX

2\"/>



**CONCRETE PAVERS ON 4" CONC. BASE SLAB**

EXPANSION JOINT AGAINST CONC., BUILDINGS & CURBING

FILL JOINTS WITH SAND/CEMENT MIX

2\"/>

Revisions	By	Date

Sign-Offs	By	Date
Drawn		
Checked		
Recommended		
Approved		
Recorded		

Sign-Offs	By	Date
Drawn		
Checked		
Recommended		
Approved		
Recorded		

Standard Drawing No. SS-4

Job No.

Date January 2005

City of Hartford, Connecticut  
 Department of Public Works

Standard Streetscape Details  
 Typical Paver Patterns and Sections

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Standard Drawing No. SS-4

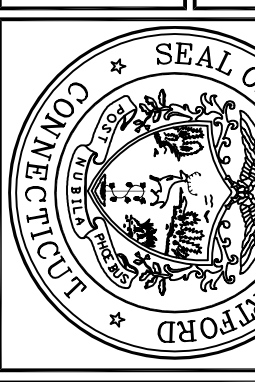
Job No.

Date January 2005

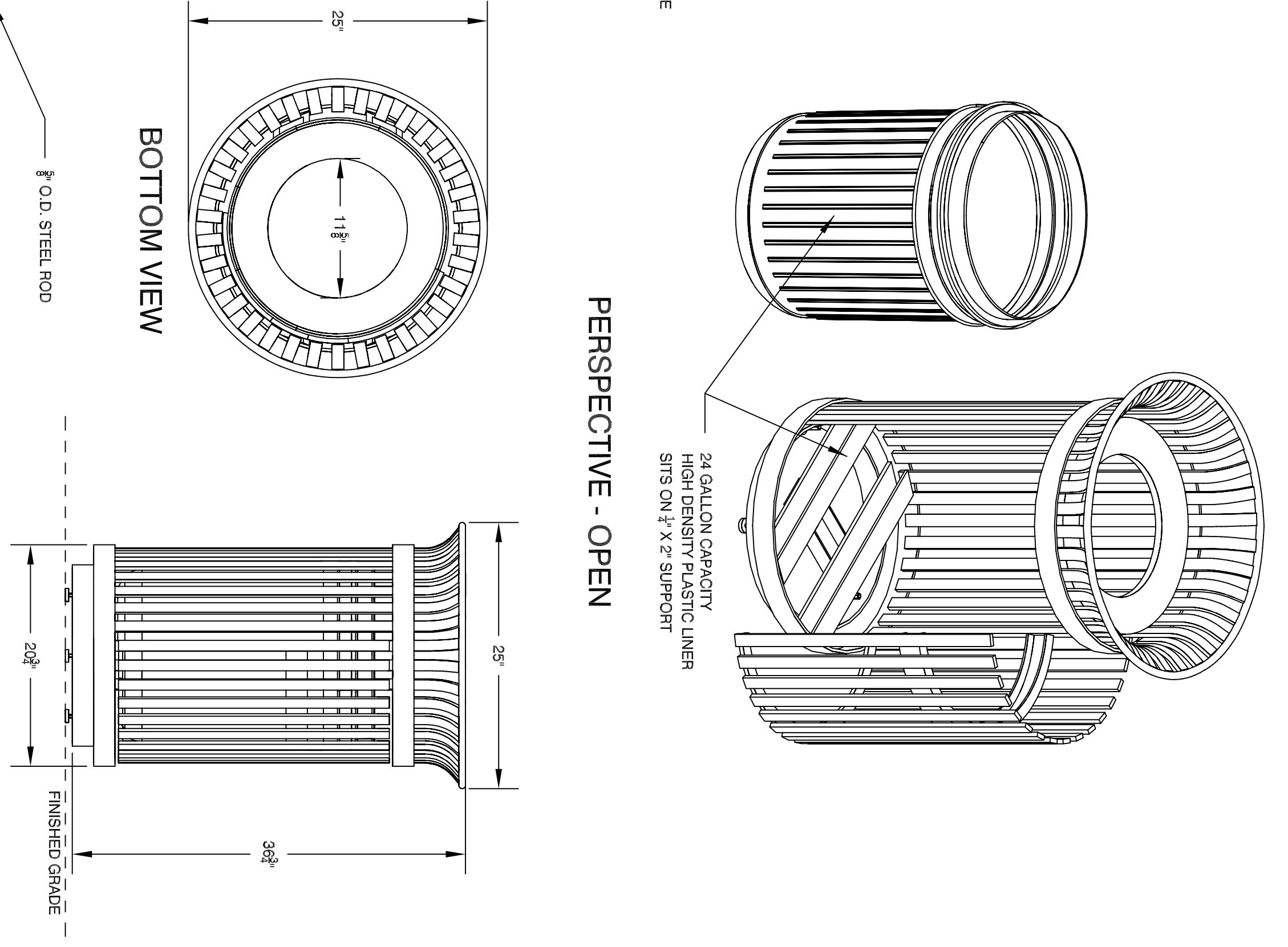
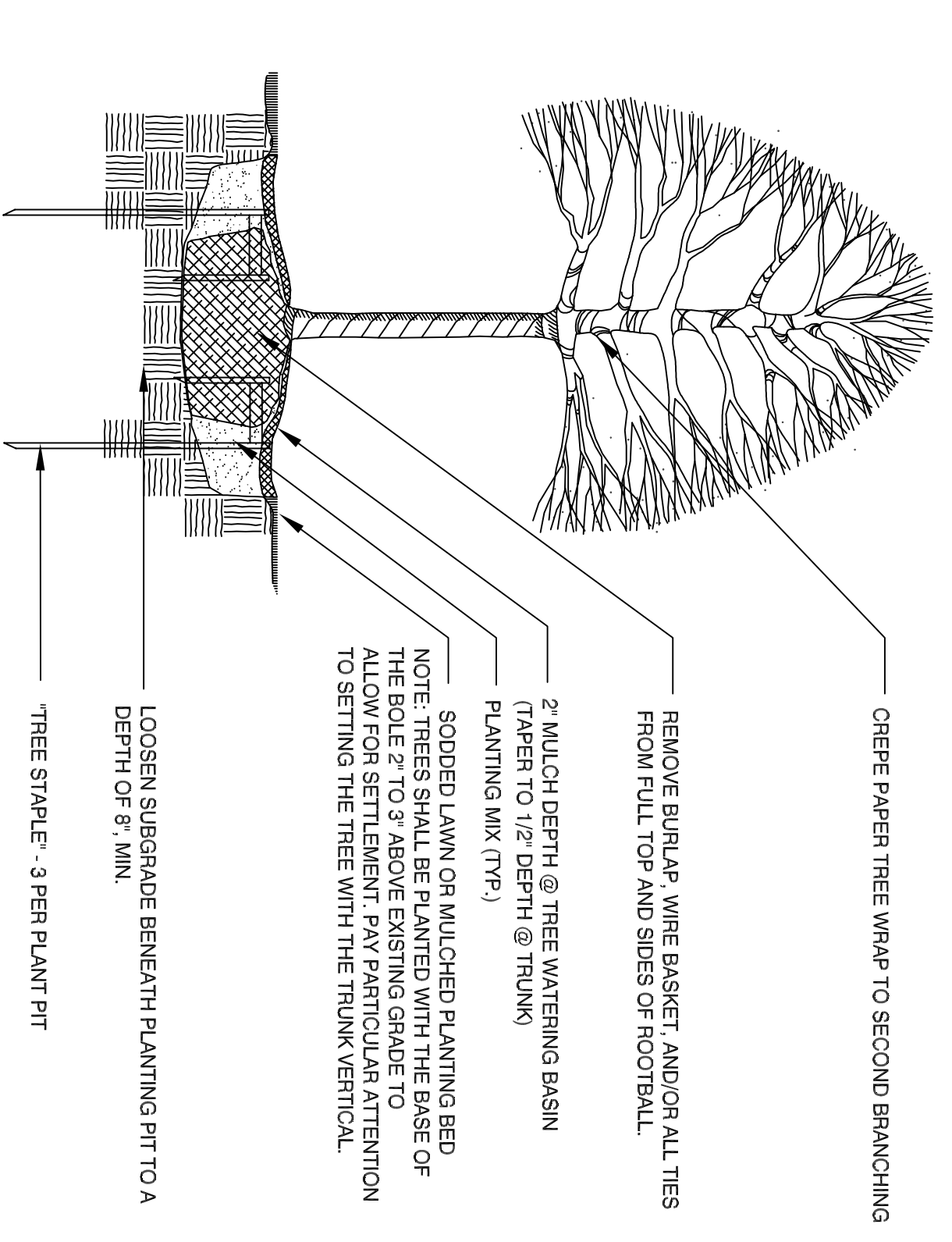
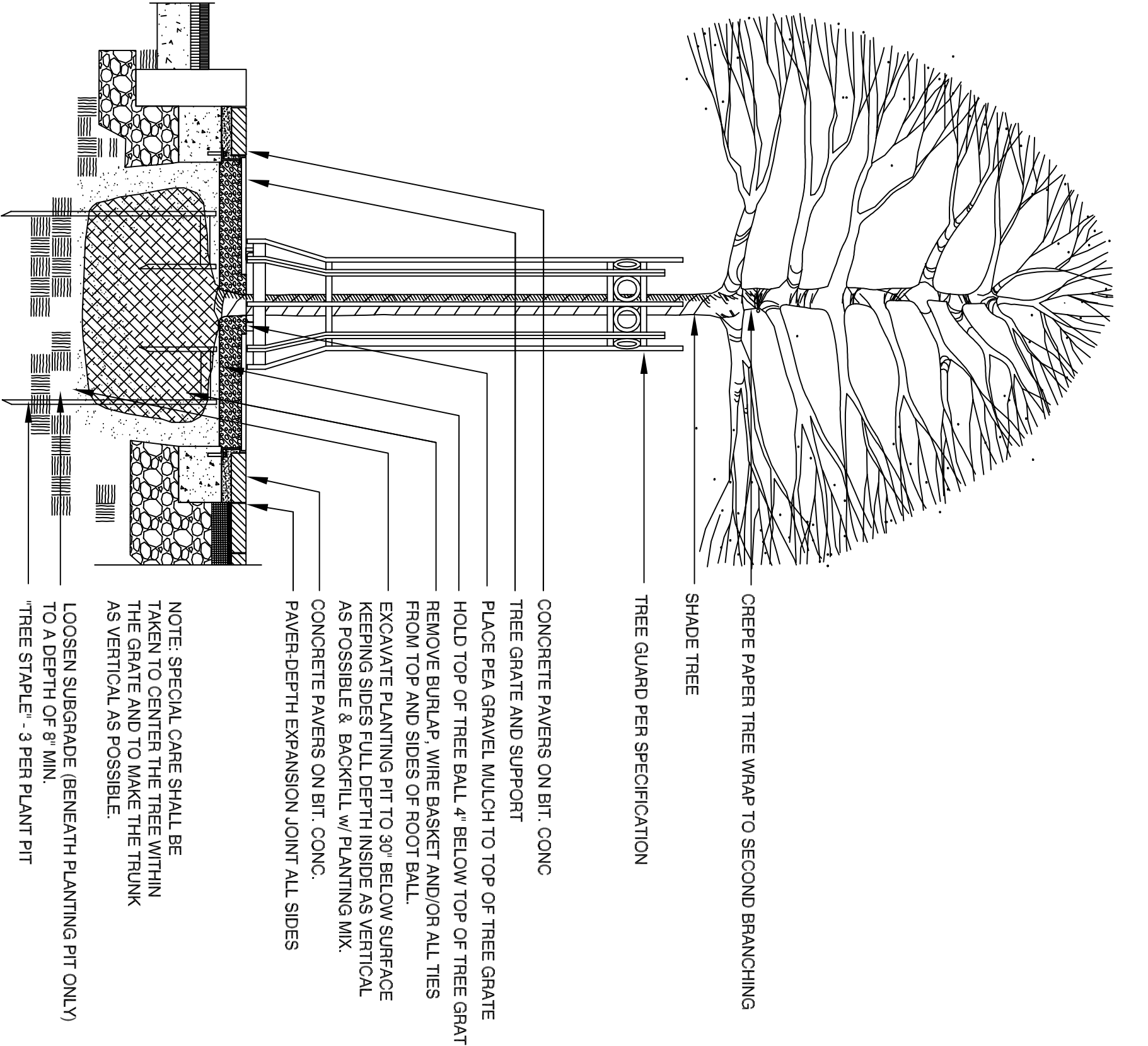
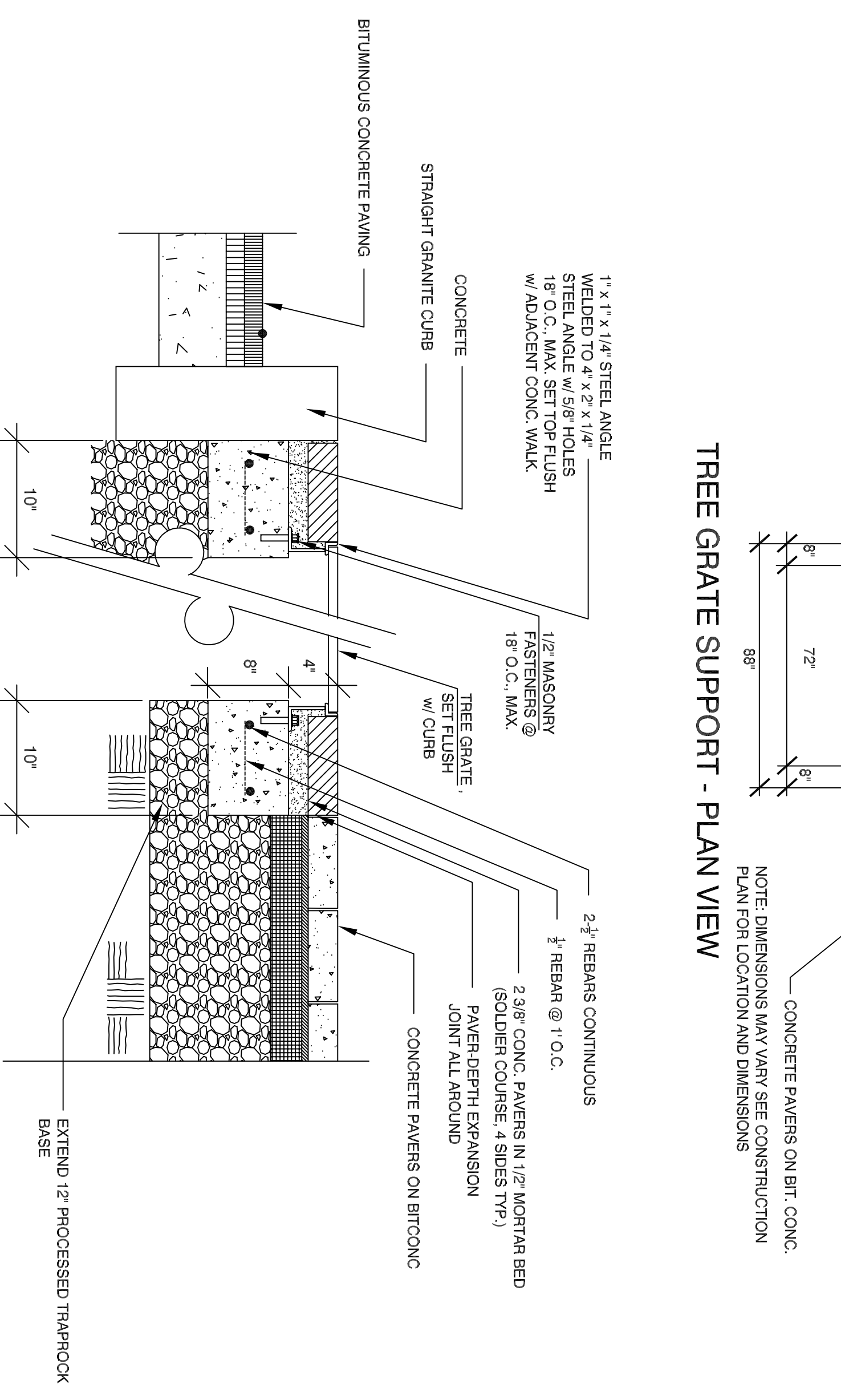
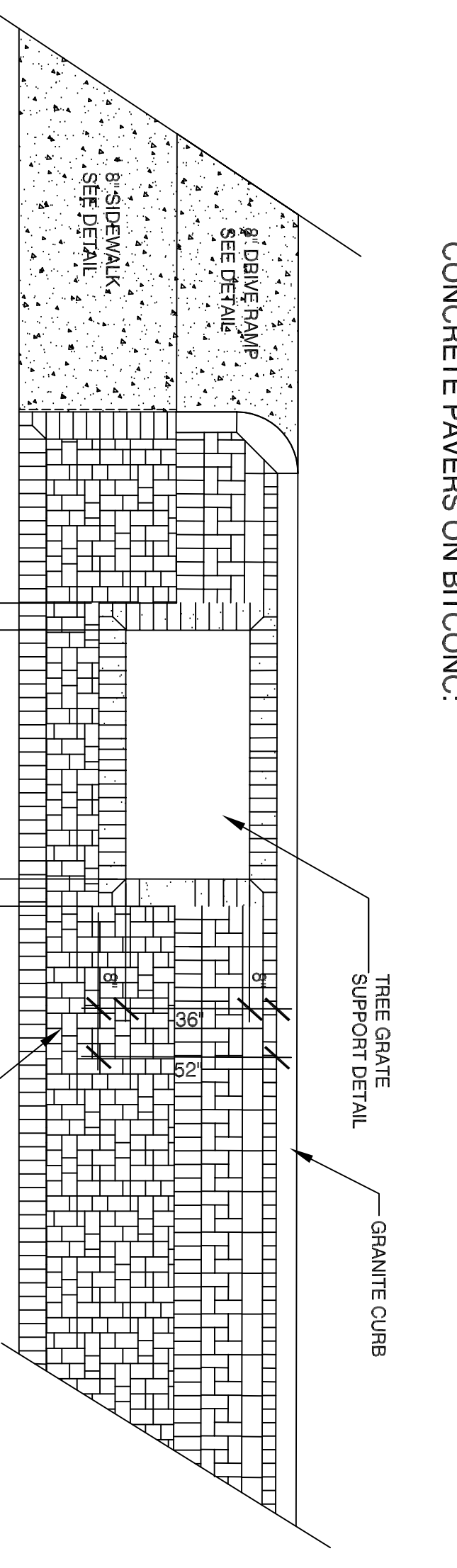
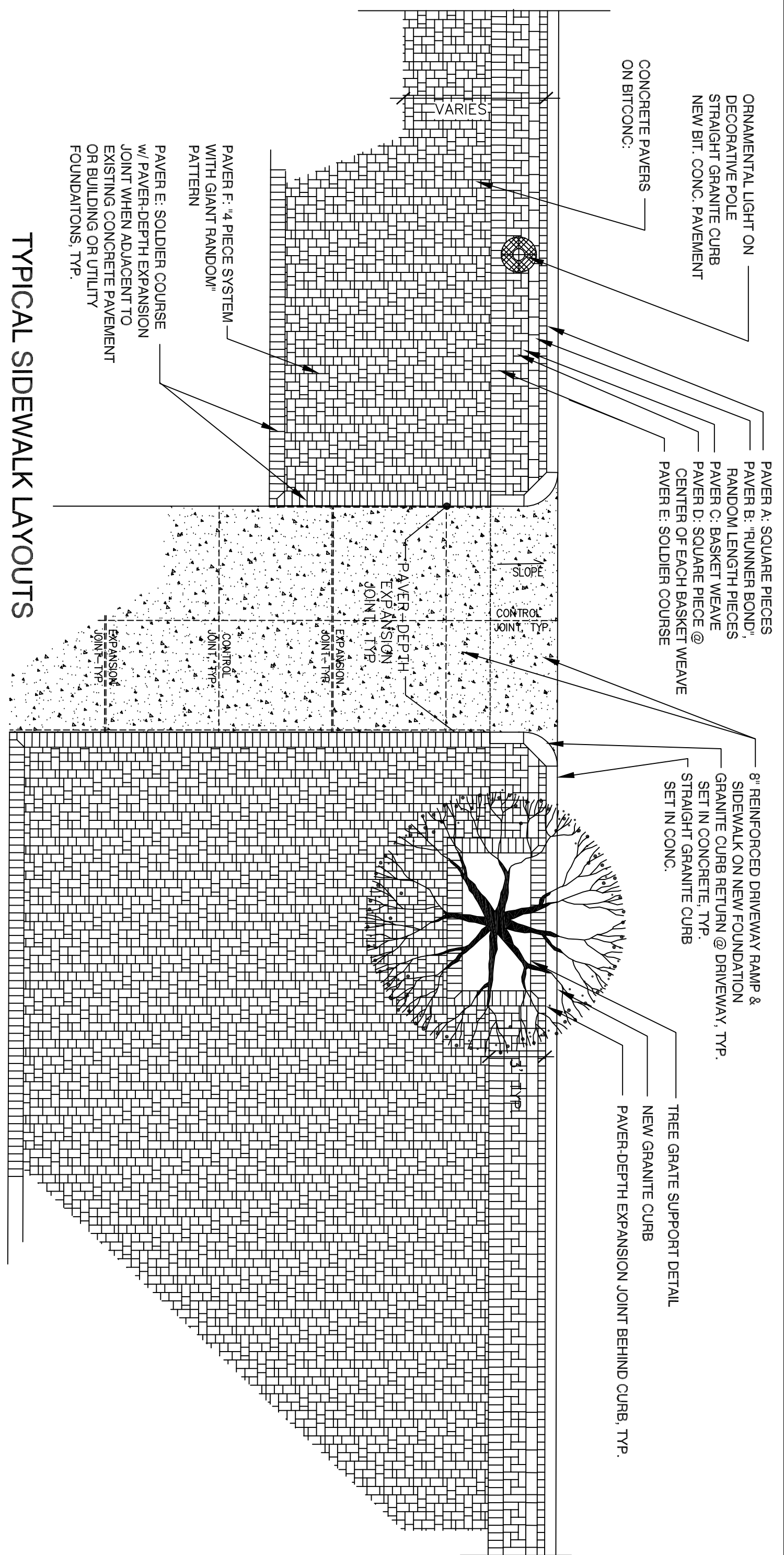
City of Hartford, Connecticut  
 Department of Public Works

Standard Streetscape Details  
 Typical Paver Patterns and Sections

File Name  
 SS-4.DWG



Sheet No.



ALL FABRICATED COMPONENTS ARE STEEL SHOT-BLASTED, ETCHED, PHOSPHATIZED, PREHEATED AND ELECTROSTATICALLY POWDER-COATED WITH TGIIC POLYESTER POWDER COATINGS. ANCHOR BOLT PROVIDED BY OTHERS.

Revisions	By	Date

Notice

Manual revisions to this drawing are prohibited. The use of this drawing by any corporation, or by any person, for any reason, without written authorized consent of The City of Hartford is prohibited.

Sign-Offs	By	Date
Drawn		
Checked		
Recommended		
Approved		
Recorded		

Standard Drawing No. SS-5

Job No.

Date January 2005

City of Hartford, Connecticut

Department of Public Works

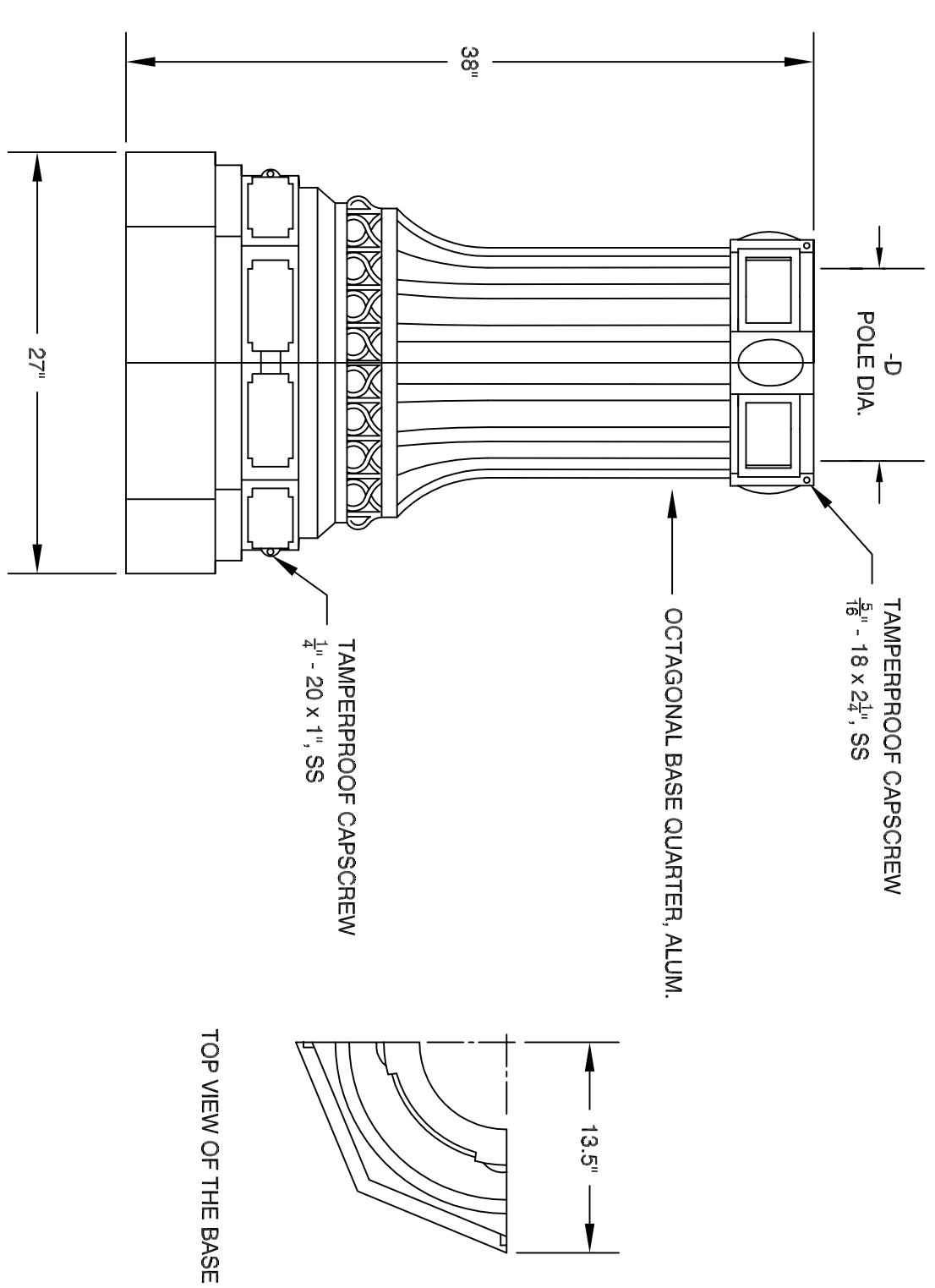
Standard Streetscape Details

Tree Grate, Guards and Trash Cans

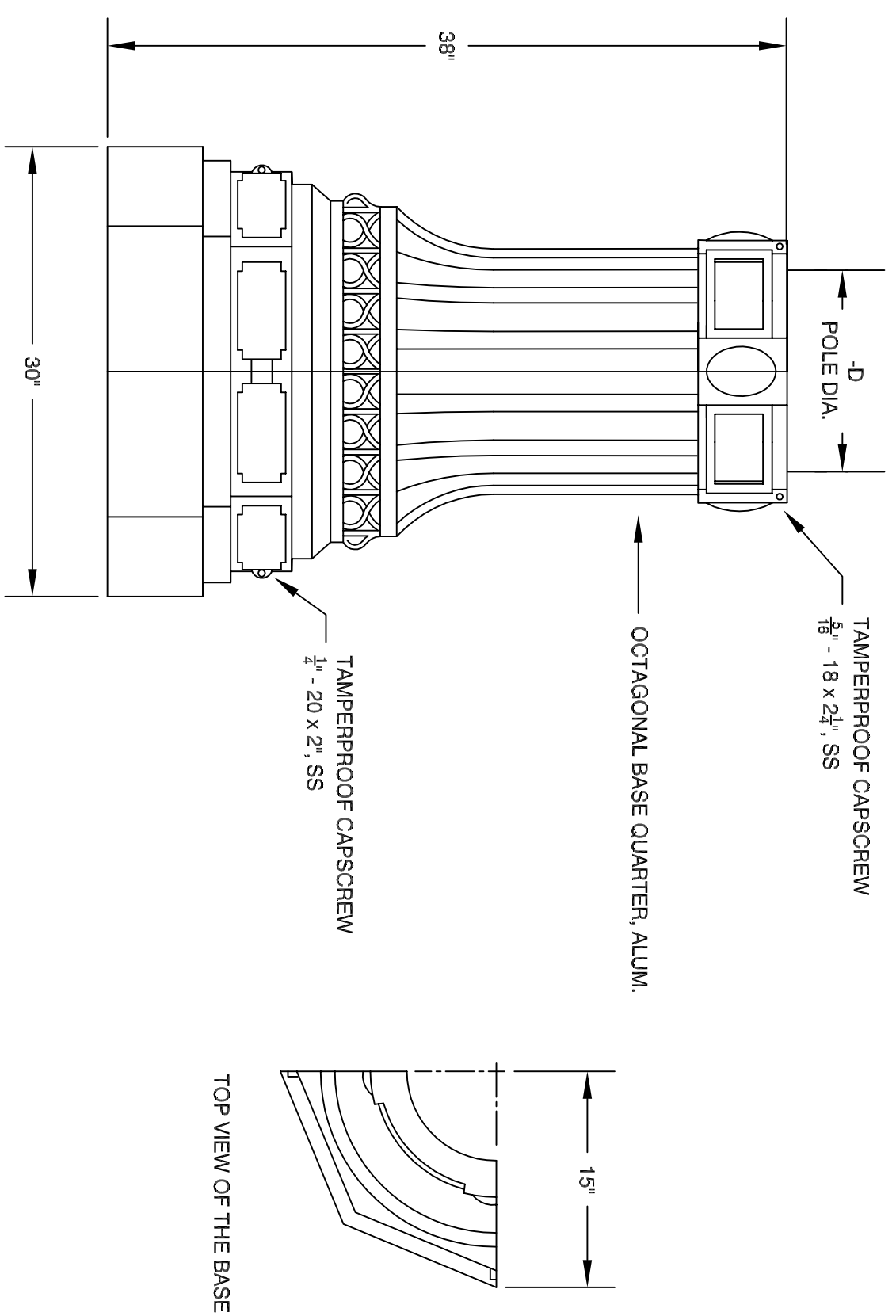


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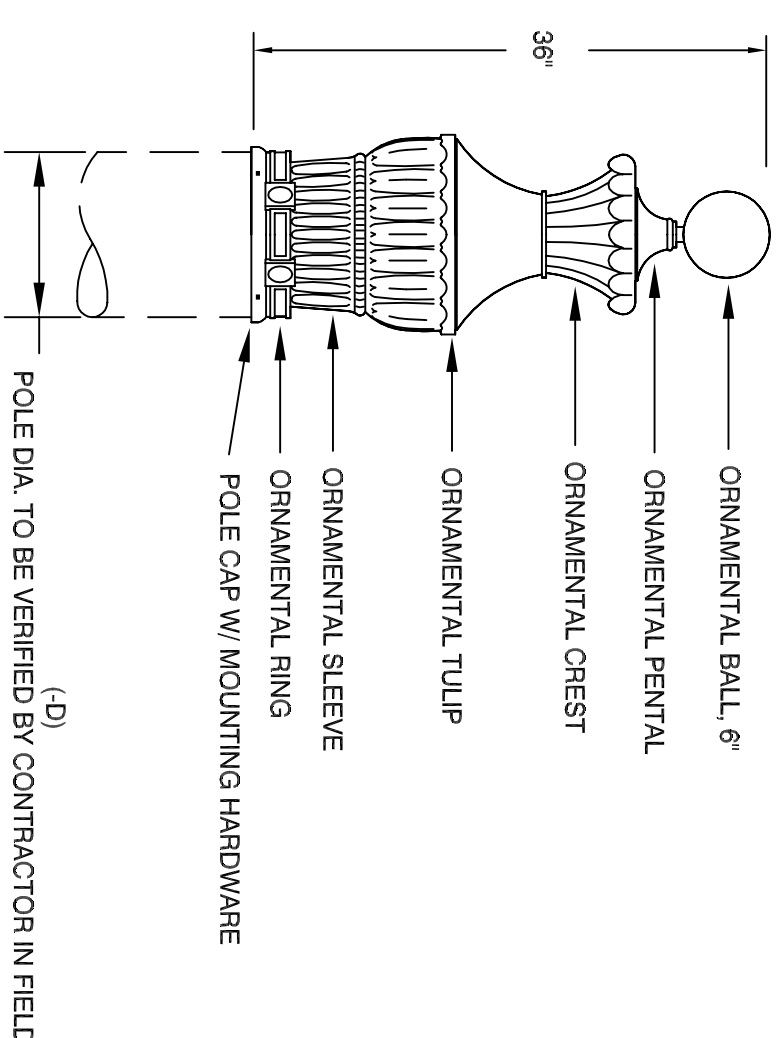
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ORNAMENTAL POLE CROWN  
FOR 9 1/4" - 12 1/4" POLE CAP



ORNAMENTAL BASE FOR POLE - TYPE II (12" - 16" DIA.)

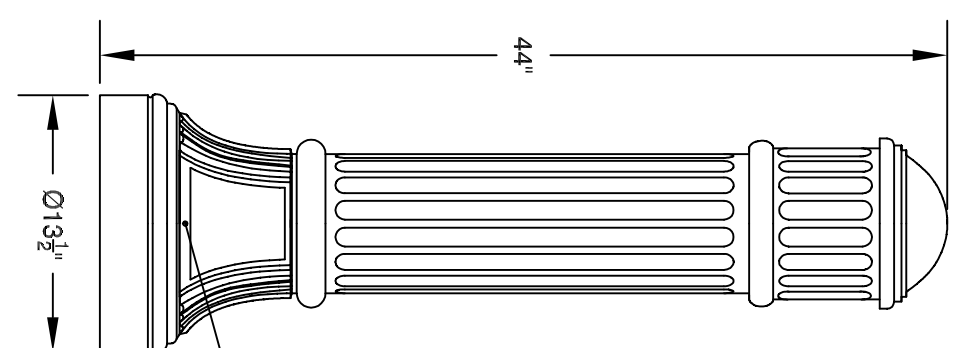


ORNAMENTAL POLE CROWN  
FOR 9 1/4" - 12 1/4" POLE CAP

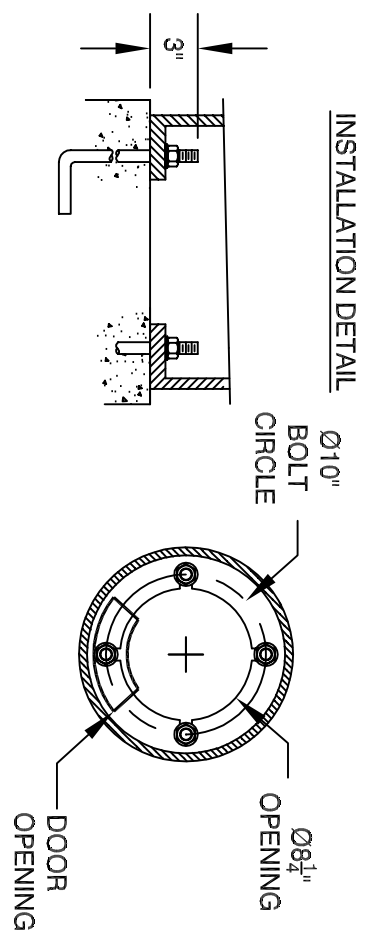
**CONSTRUCTION:**  
THE BOLLARD SHALL BE CONSTRUCTED FULLY CAST ALUMINUM OR CAST IRON. AN ACCESS DOOR IN THE BASE SHALL BE 12" X 6" AND SECURED WITH STAINLESS STEEL HARDWARE. A 3/8"-16 UNC GROUNDING LUG SHALL BE PROVIDED INSIDE THE BASE ADJACENT TO THE ACCESS DOOR.

**DIMENSIONS:**  
THE BOLLARD SHALL HAVE AN OVERALL HEIGHT OF 44". THE LENS SHALL BE 8" IN DIAMETER.

**FINISH:**  
THE BOLLARD SHALL BE PAINTED WITH A THREE STEP PAINT PROCESS. AN ACID ETCHING INDUSTRIAL WASH PRIMER, TWO PART EPOXY BASE PRIMER WITH THE FINISH COAT TO BE A TWO PART ALIPHATIC ACRYLIC POLYURETHANE. COLOR TO BE SPECIFIED.



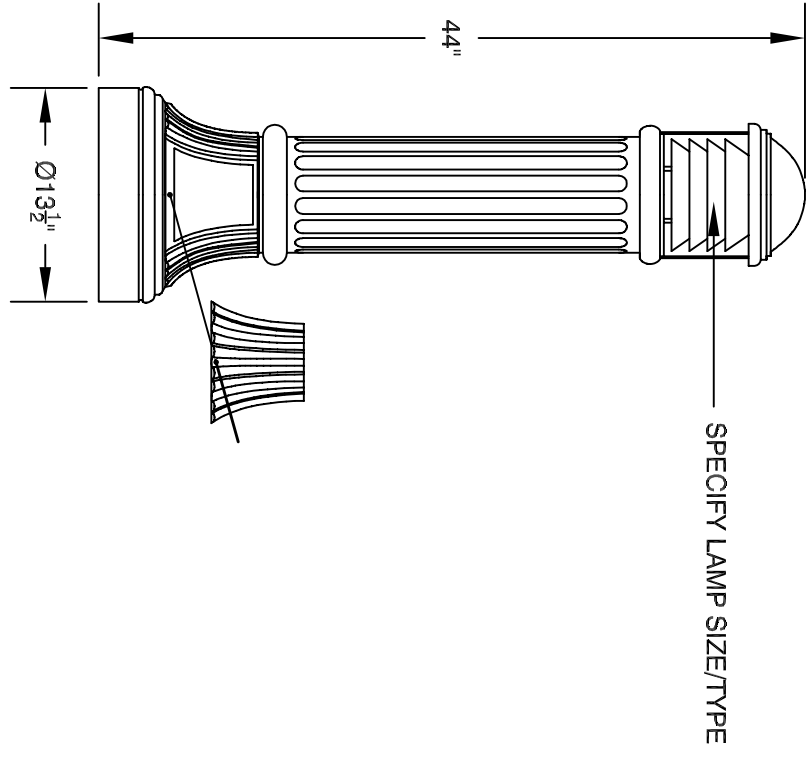
WASHINGTON BOLLARD



**CONSTRUCTION:**  
THE BOLLARD SHALL BE CAST ALUMINUM OR CAST IRON. AN ACCESS DOOR IN THE BASE SHALL BE 12" X 6" AND SECURED WITH STAINLESS STEEL HARDWARE. A 3/8"-16 UNC GROUNDING LUG SHALL BE PROVIDED INSIDE THE BASE ADJACENT TO THE ACCESS DOOR.

**DIMENSIONS:**  
THE BOLLARD SHALL HAVE AN OVERALL HEIGHT OF 44". THE LENS SHALL BE 8" IN DIAMETER.

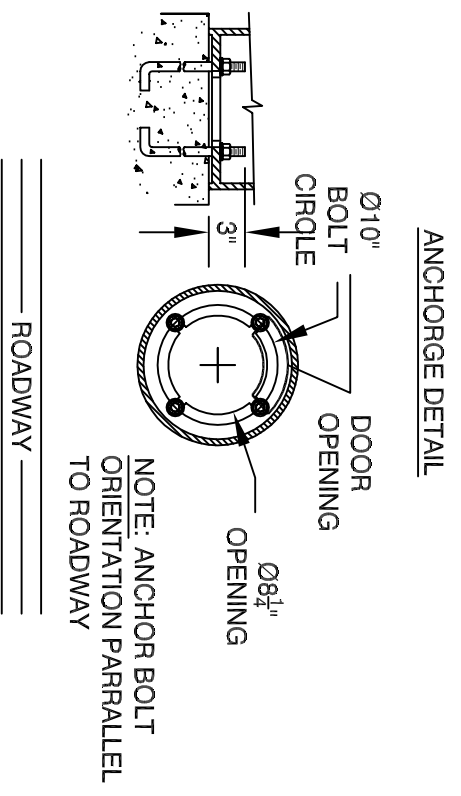
**FINISH:**  
THE BOLLARD SHALL BE PAINTED WITH A THREE STEP PAINT PROCESS. AN ACID ETCHING INDUSTRIAL WASH PRIMER, TWO PART EPOXY BASE PRIMER WITH THE FINISH COAT TO BE A TWO PART ALIPHATIC ACRYLIC POLYURETHANE. COLOR TO BE SPECIFIED.



**CONSTRUCTION:**  
THE BOLLARD SHALL BE CAST ALUMINUM OR CAST IRON. AN ACCESS DOOR IN THE BASE SHALL BE 12" X 6" AND SECURED WITH STAINLESS STEEL HARDWARE. A 3/8"-16 UNC GROUNDING LUG SHALL BE PROVIDED INSIDE THE BASE ADJACENT TO THE ACCESS DOOR.

**DIMENSIONS:**  
THE BOLLARD SHALL HAVE AN OVERALL HEIGHT OF 45 1/2". THE LENS SHALL BE 8" IN DIAMETER.

**FINISH:**  
THE BOLLARD SHALL BE PAINTED WITH A THREE STEP PAINT PROCESS. AN ACID ETCHING INDUSTRIAL WASH PRIMER, TWO PART EPOXY BASE PRIMER WITH THE FINISH COAT TO BE A TWO PART ALIPHATIC ACRYLIC POLYURETHANE. COLOR TO BE SPECIFIED.

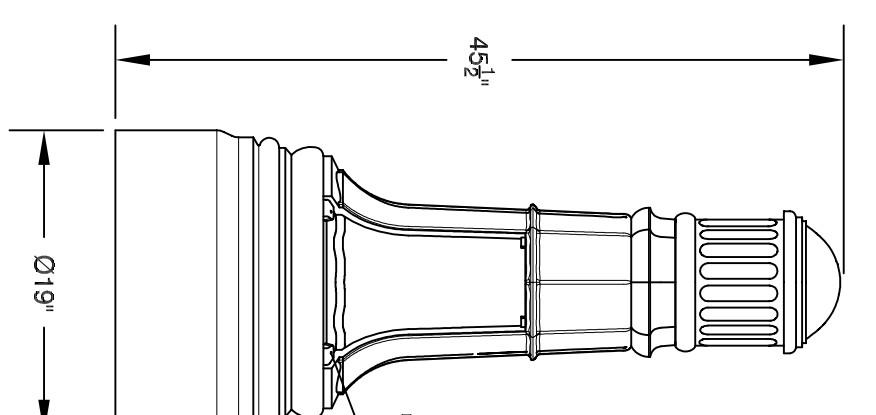


WASHINGTON BOLLARD ILLUMINATED

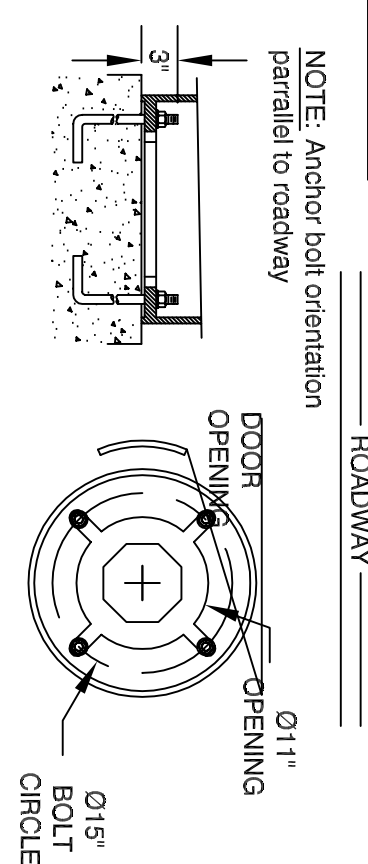
**CONSTRUCTION:**  
THE BOLLARD SHALL BE CAST ALUMINUM OR CAST IRON. AN ACCESS DOOR IN THE BASE SHALL BE 12" X 6" AND SECURED WITH STAINLESS STEEL HARDWARE. A 3/8"-16 UNC GROUNDING LUG SHALL BE PROVIDED INSIDE THE BASE ADJACENT TO THE ACCESS DOOR.

**DIMENSIONS:**  
THE BOLLARD SHALL HAVE AN OVERALL HEIGHT OF 45 1/2". THE LENS SHALL BE 8" IN DIAMETER.

**FINISH:**  
THE BOLLARD SHALL BE PAINTED WITH A THREE STEP PAINT PROCESS. AN ACID ETCHING INDUSTRIAL WASH PRIMER, TWO PART EPOXY BASE PRIMER WITH THE FINISH COAT TO BE A TWO PART ALIPHATIC ACRYLIC POLYURETHANE. COLOR TO BE SPECIFIED.



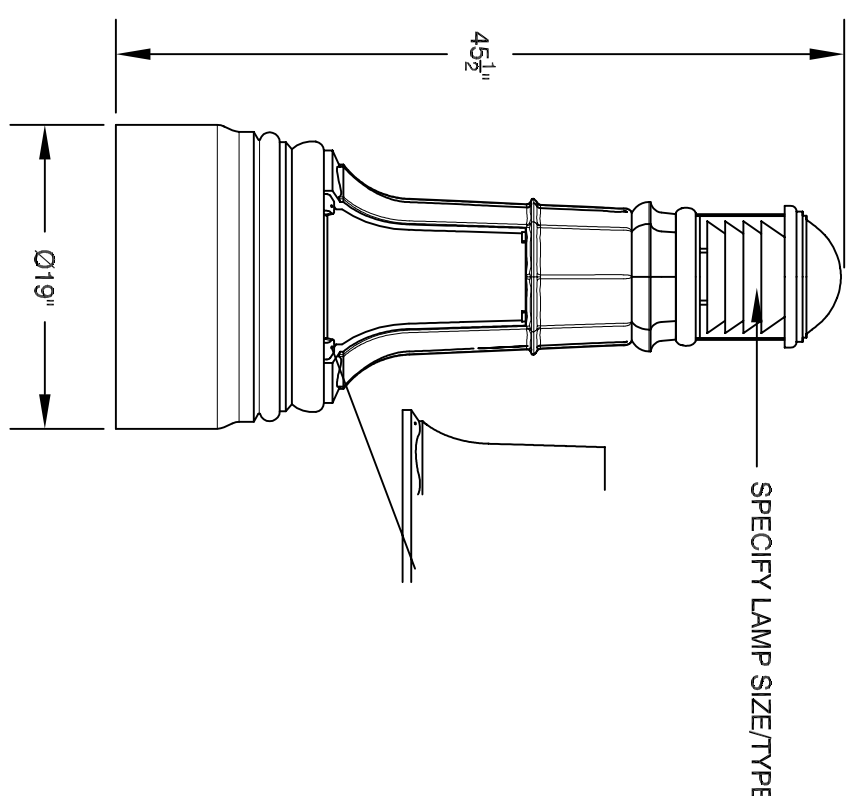
OBSTRUCTION BOLLARD



**CONSTRUCTION:**  
THE BOLLARD SHALL BE CAST ALUMINUM OR CAST IRON. AN ACCESS DOOR IN THE BASE SHALL BE 12" X 6" AND SECURED WITH STAINLESS STEEL HARDWARE. A 3/8"-16 UNC GROUNDING LUG SHALL BE PROVIDED INSIDE THE BASE ADJACENT TO THE ACCESS DOOR.

**DIMENSIONS:**  
THE BOLLARD SHALL HAVE AN OVERALL HEIGHT OF 45 1/2". THE LENS SHALL BE 8" IN DIAMETER.

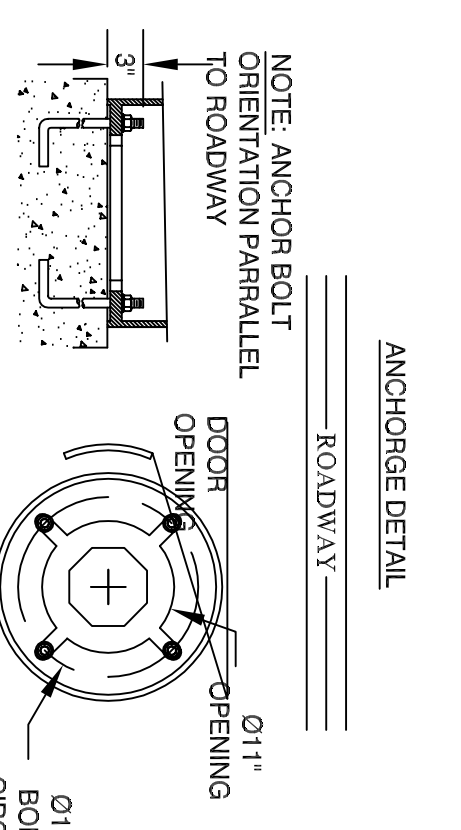
**FINISH:**  
THE BOLLARD SHALL BE PAINTED WITH A THREE STEP PAINT PROCESS. AN ACID ETCHING INDUSTRIAL WASH PRIMER, TWO PART EPOXY BASE PRIMER WITH THE FINISH COAT TO BE A TWO PART ALIPHATIC ACRYLIC POLYURETHANE. COLOR TO BE SPECIFIED.



**CONSTRUCTION:**  
THE BOLLARD SHALL BE CAST ALUMINUM OR CAST IRON. AN ACCESS DOOR IN THE BASE SHALL BE 12" X 6" AND SECURED WITH STAINLESS STEEL HARDWARE. A 3/8"-16 UNC GROUNDING LUG SHALL BE PROVIDED INSIDE THE BASE ADJACENT TO THE ACCESS DOOR.

**DIMENSIONS:**  
THE BOLLARD SHALL HAVE AN OVERALL HEIGHT OF 45 1/2". THE LENS SHALL BE 8" IN DIAMETER.

**FINISH:**  
THE BOLLARD SHALL BE PAINTED WITH A THREE STEP PAINT PROCESS. AN ACID ETCHING INDUSTRIAL WASH PRIMER, TWO PART EPOXY BASE PRIMER WITH THE FINISH COAT TO BE A TWO PART ALIPHATIC ACRYLIC POLYURETHANE. COLOR TO BE SPECIFIED.



OBSTRUCTION BOLLARD ILLUMINATED

Revisions	By	Date	Notice

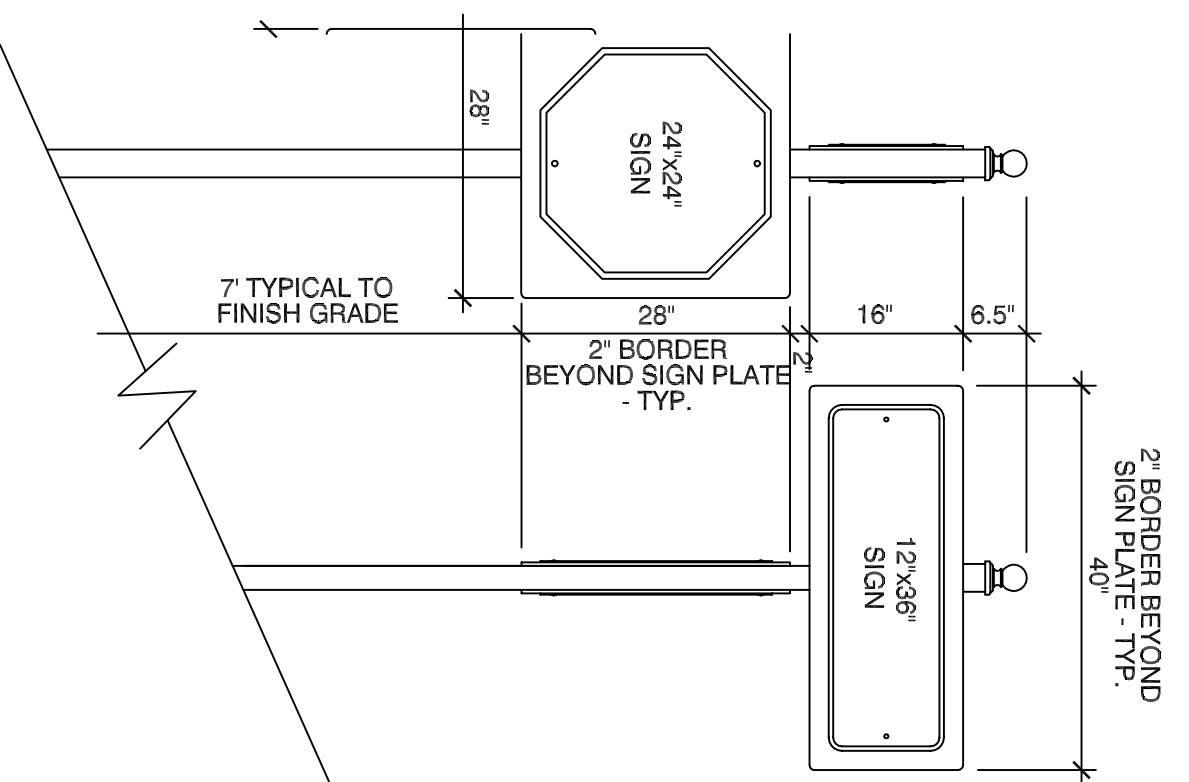
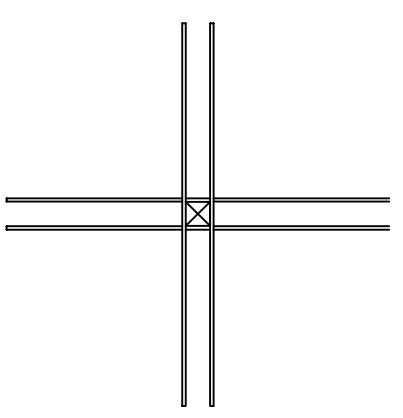
Sign-Offs	By	Date
Drawn		
Checked		
Recommended		
Approved		
Recorded		

Standard Drawing No. SS-6	Job No.	Date January 2005
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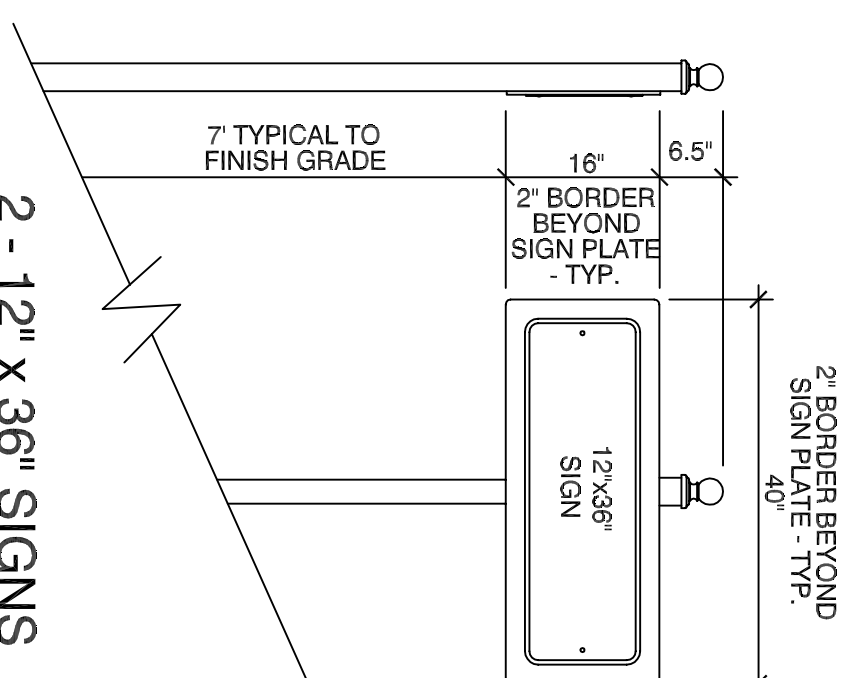
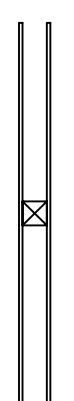
City of Hartford, Connecticut  
Department of Public Works  
Standard Streetscape Details  
Ornamental Bollards, Base Enclosures and Caps



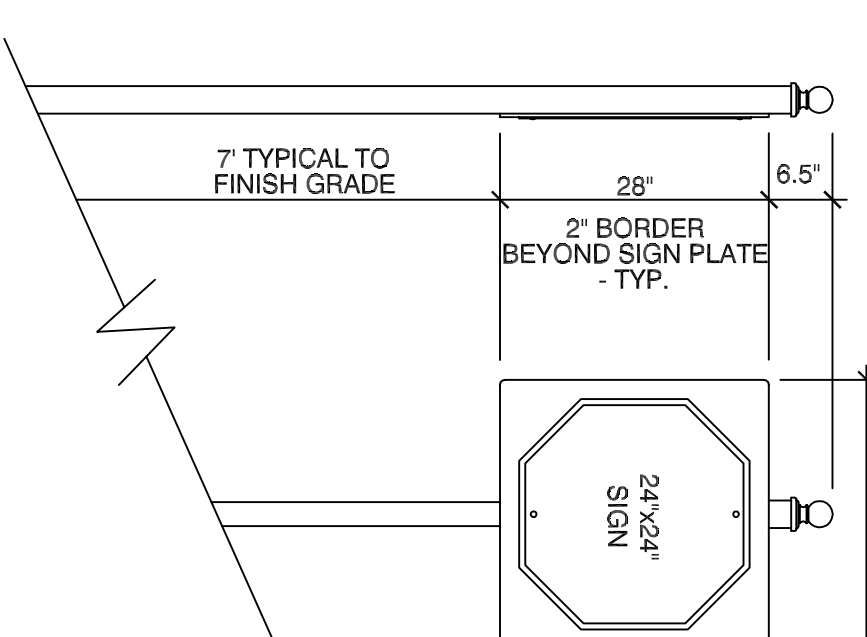
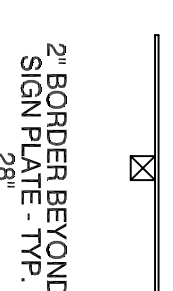
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	SS-6.DWG



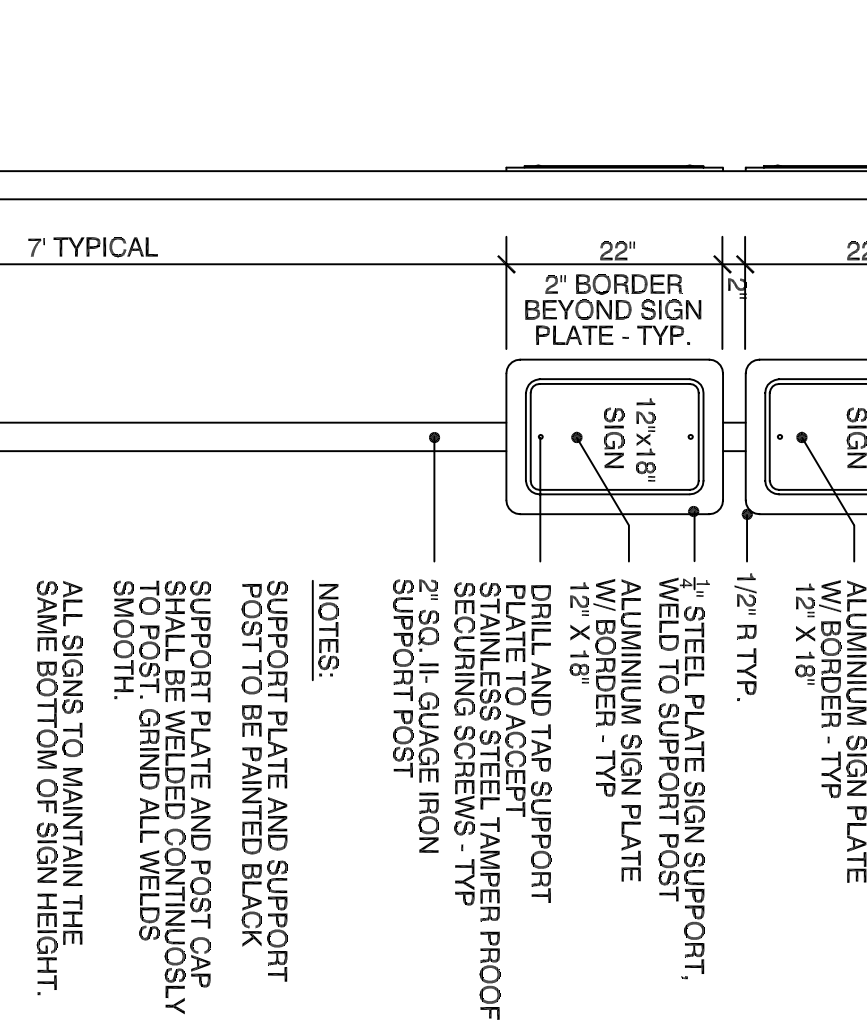
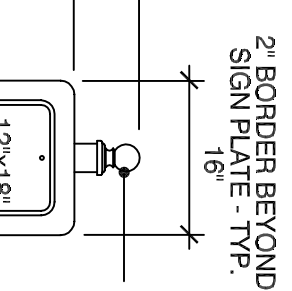
2 - 12" X 36" SIGNS  
2 - 24" X 24" SIGNS



2 - 12" X 36" SIGNS

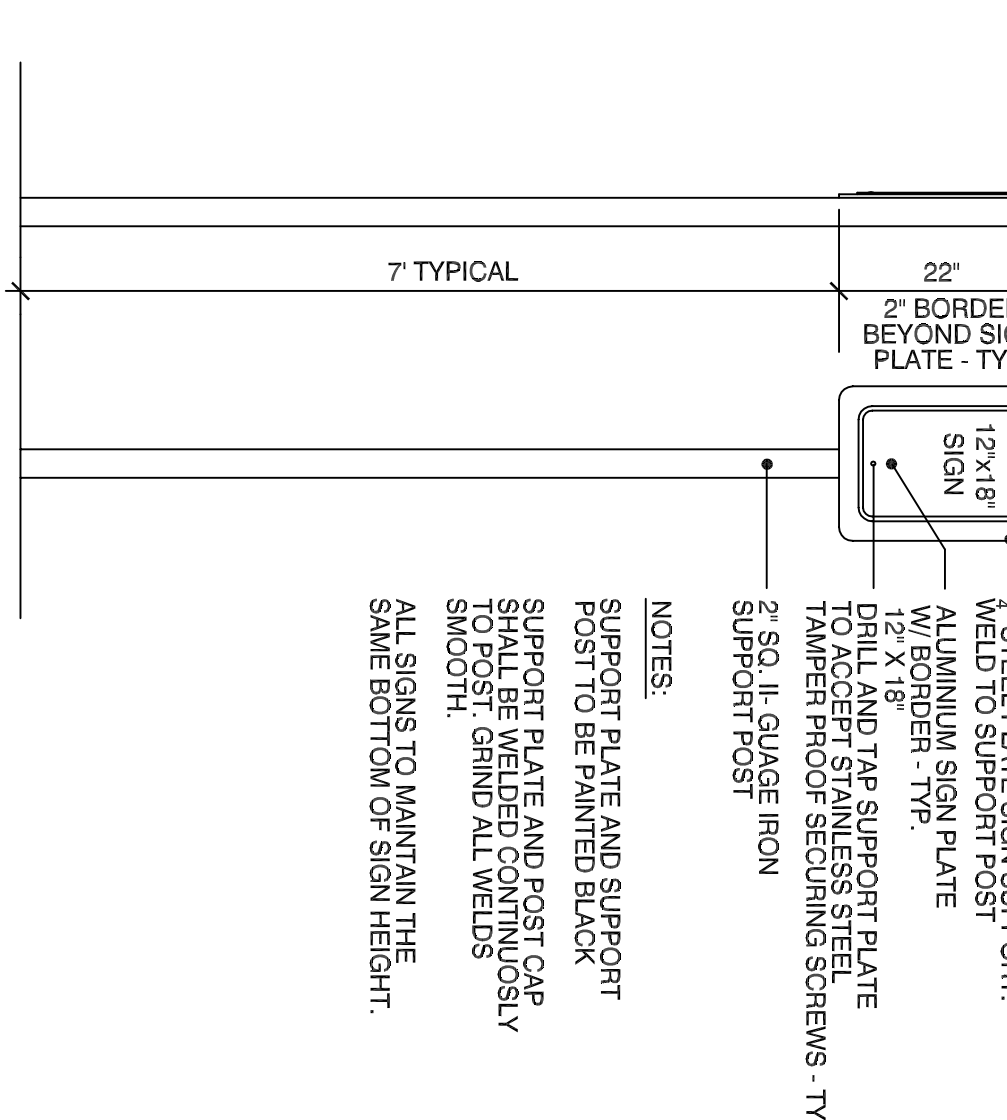
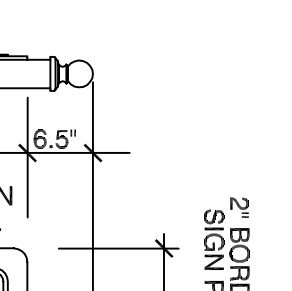


1 - 24" X 24" SIGN



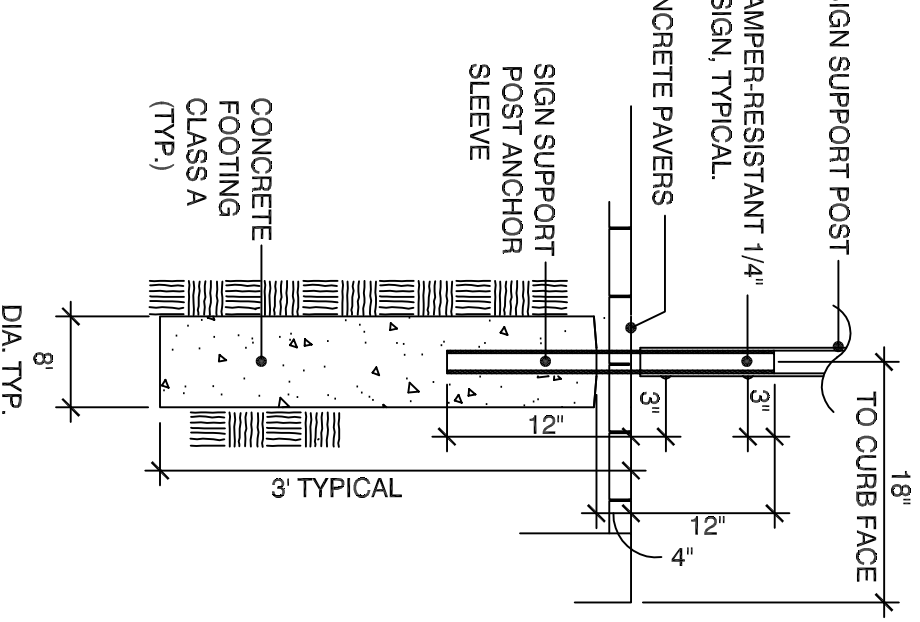
SIGN POST AND BACKER FOR  
2 - 12" X 18" SIGNS

- NOTES:
- SUPPORT PLATE AND SUPPORT POST TO BE PAINTED BLACK
  - SUPPORT PLATE AND POST CAP SHALL BE WELDED CONTINUOUSLY
  - WELDS SHALL BE GRIND ALL WELDS SMOOTH.
  - ALL SIGNS TO MAINTAIN THE SAME BOTTOM OF SIGN HEIGHT.



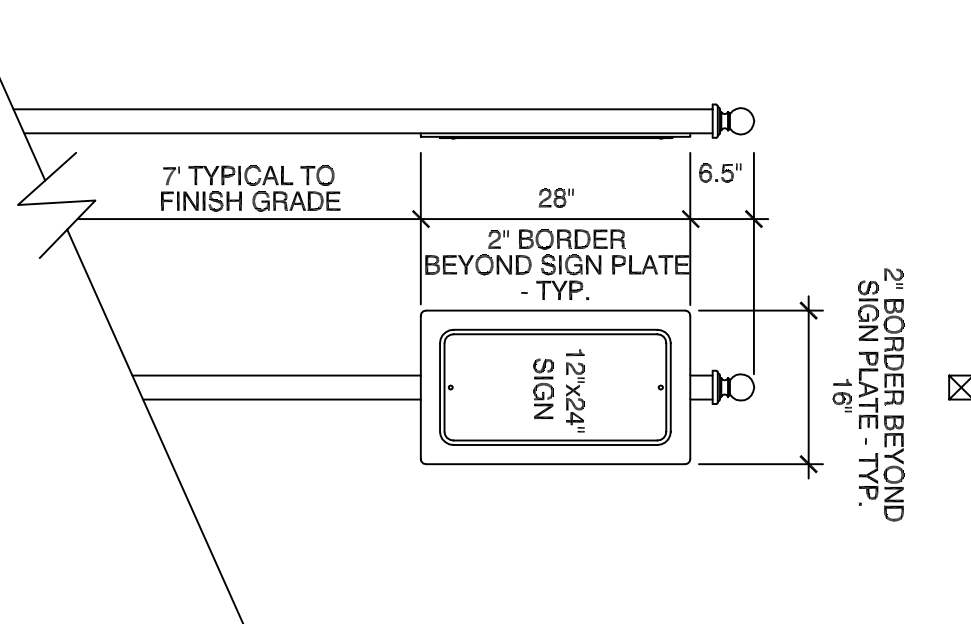
SIGN POST AND BACKER FOR 12" X 18" SIGNS

- NOTES:
- SUPPORT PLATE AND SUPPORT POST TO BE PAINTED BLACK
  - SUPPORT PLATE AND POST CAP SHALL BE WELDED CONTINUOUSLY
  - WELDS SHALL BE GRIND ALL WELDS SMOOTH.
  - ALL SIGNS TO MAINTAIN THE SAME BOTTOM OF SIGN HEIGHT.

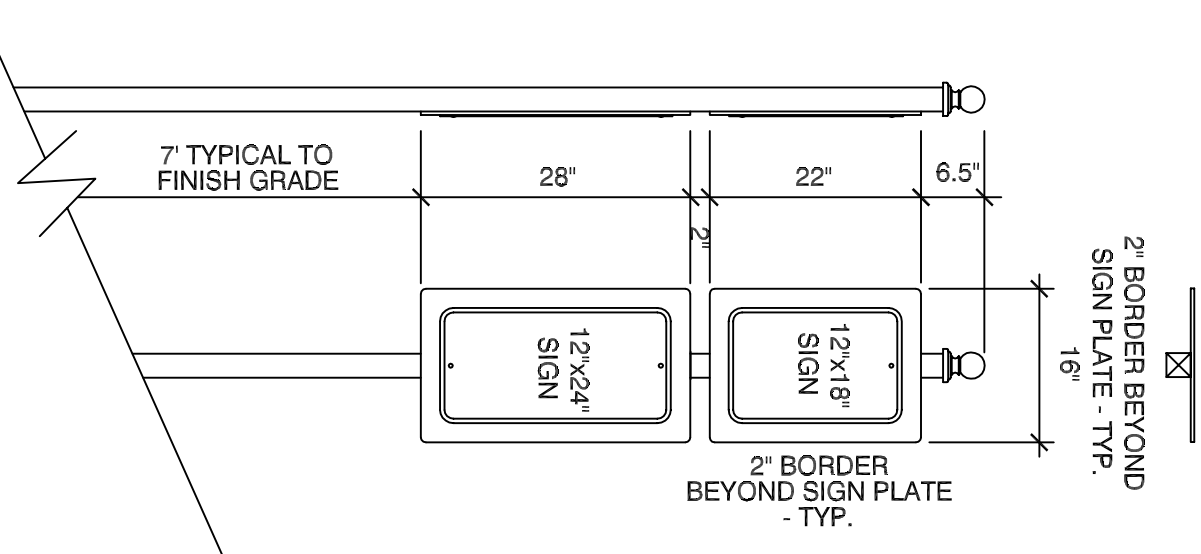


SIGN POST FOOTING

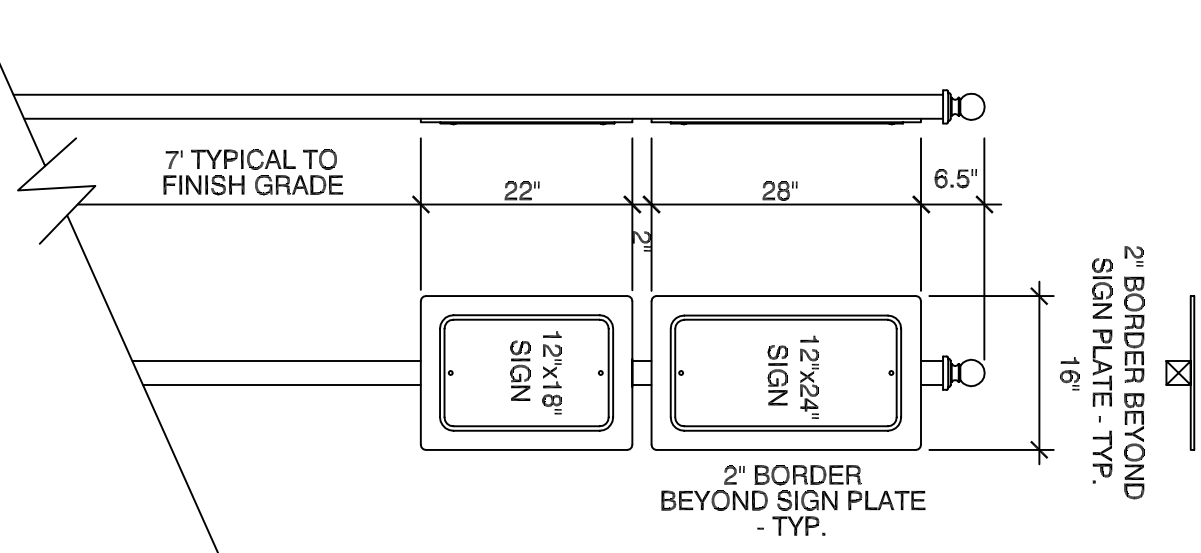
NOTE:  
FOR PARKING REGULATION SIGNS, SET POST AT 45 DEGREES TO THE CURB. FOR ALL OTHER SIGNS, SET THE POLE AT 90 DEGREES TO THE CURB.



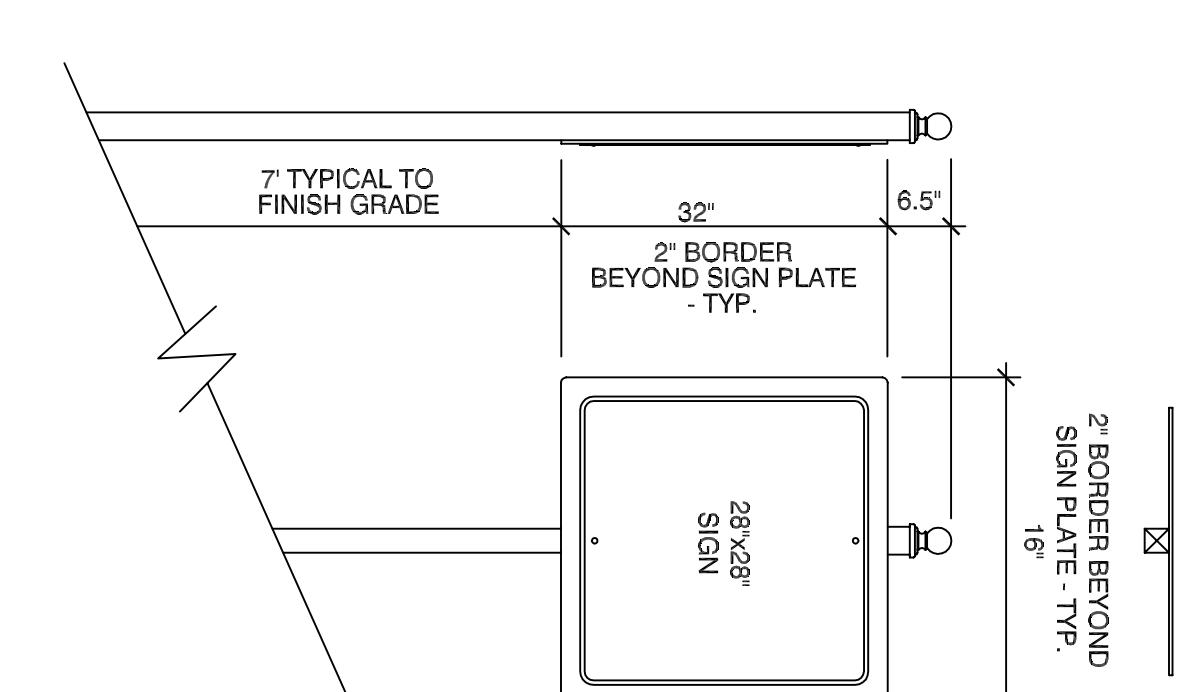
SIGN POST AND BACKER FOR  
1 - 12" X 24" SIGN



1 - 12" X 18" SIGN  
1 - 12" X 24" SIGN



1 - 12" X 24" SIGN  
1 - 12" X 18" SIGN



SIGN POST AND BACKER FOR  
1 - 28" X 28" SIGN

Revisions	By	Date	Notice	Sign-Offs	By	Date
			Manual revisions to this drawing are prohibited. The use of this drawing by any corporation, or by any person for any reason, without written authorized consent of The City of Hartford is prohibited.	Drawn		
				Checked		
				Recommended		
				Approved		
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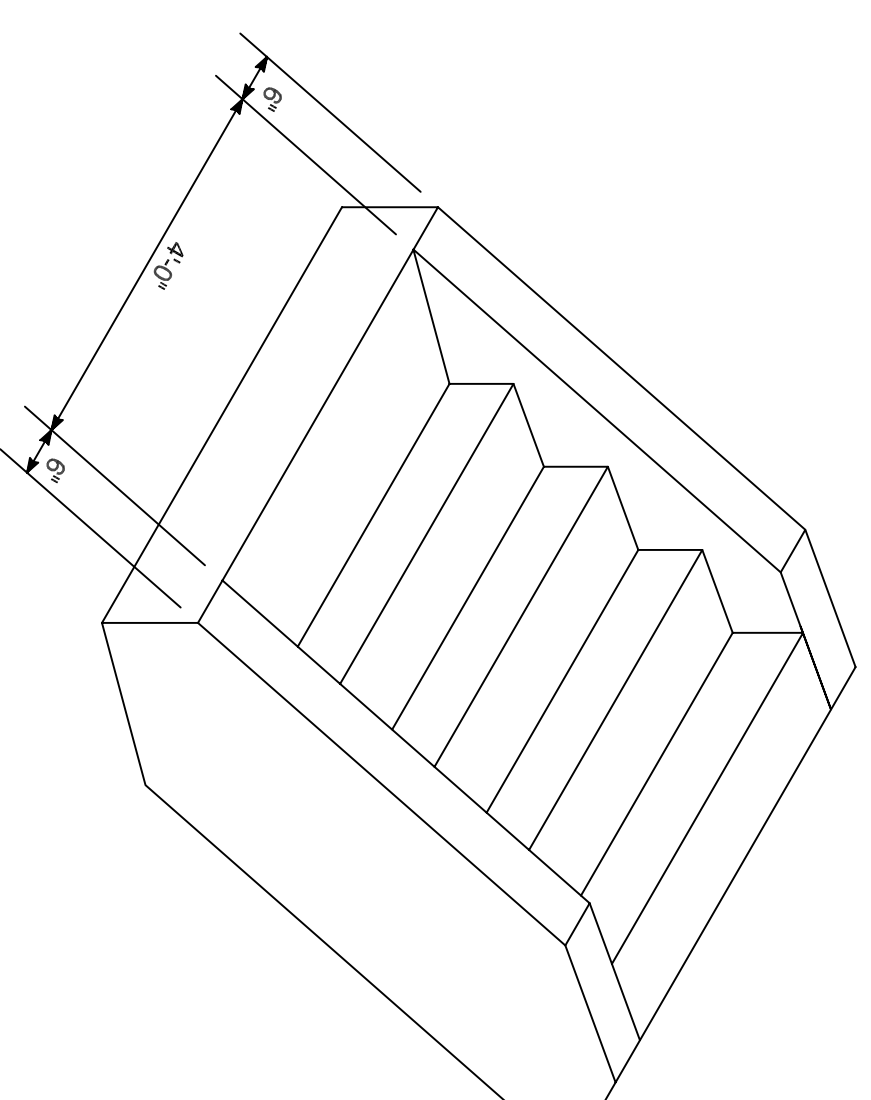
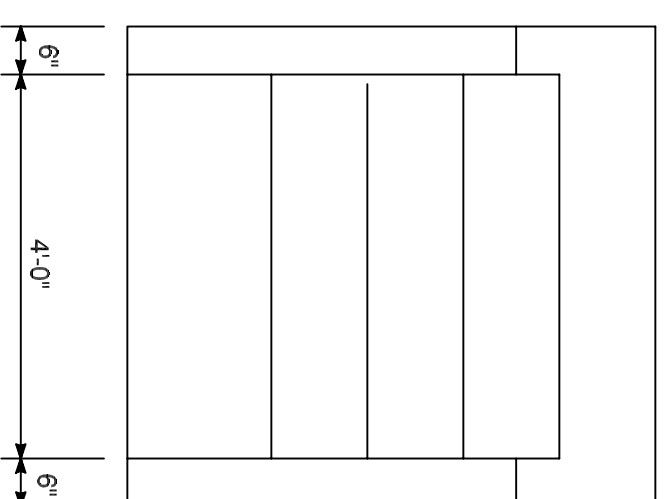
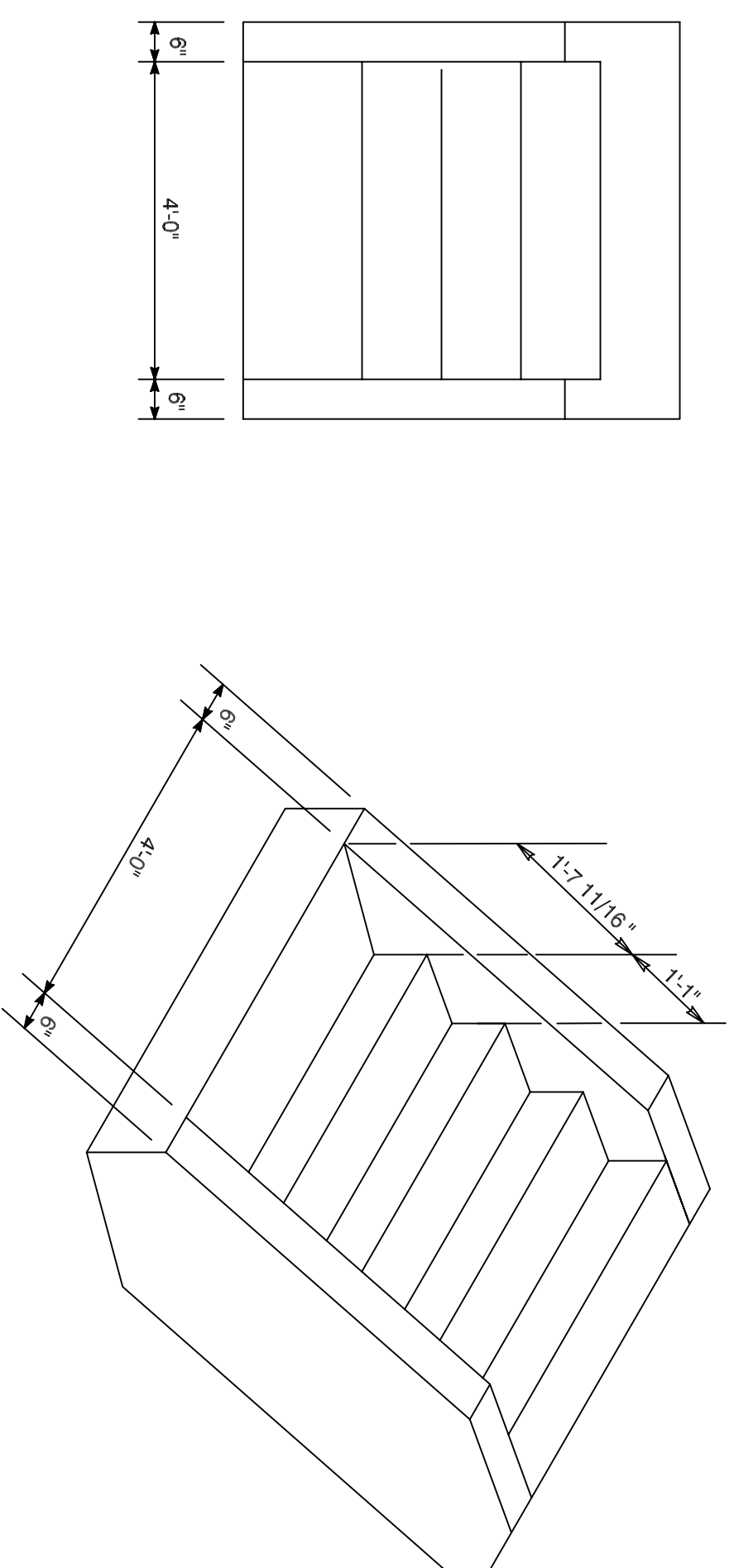
  

Standard Drawing No. SS-7	Job No.	Date January 2005
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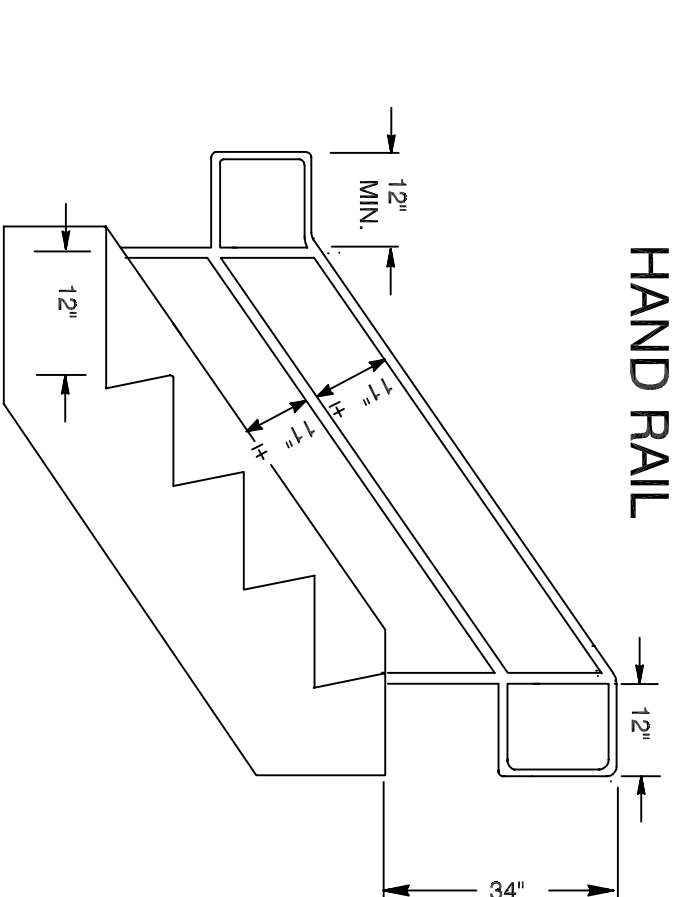
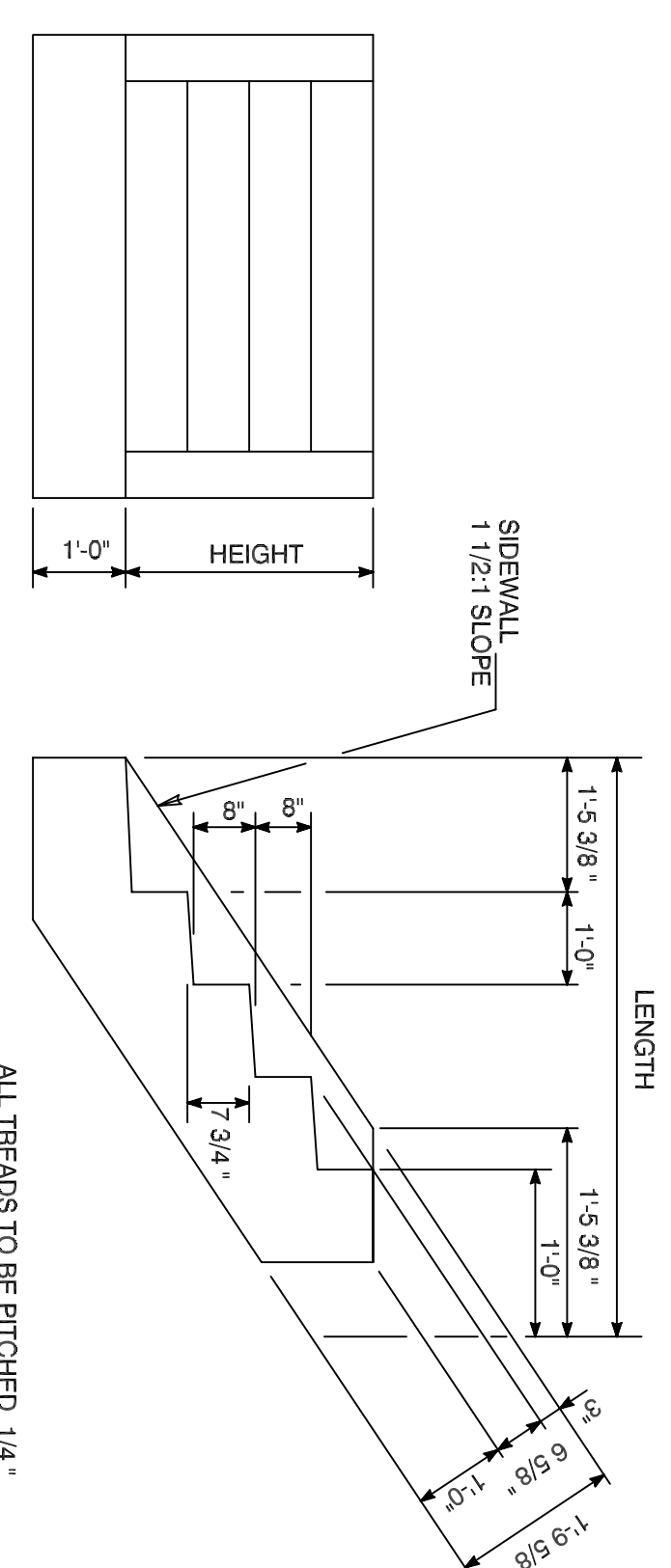
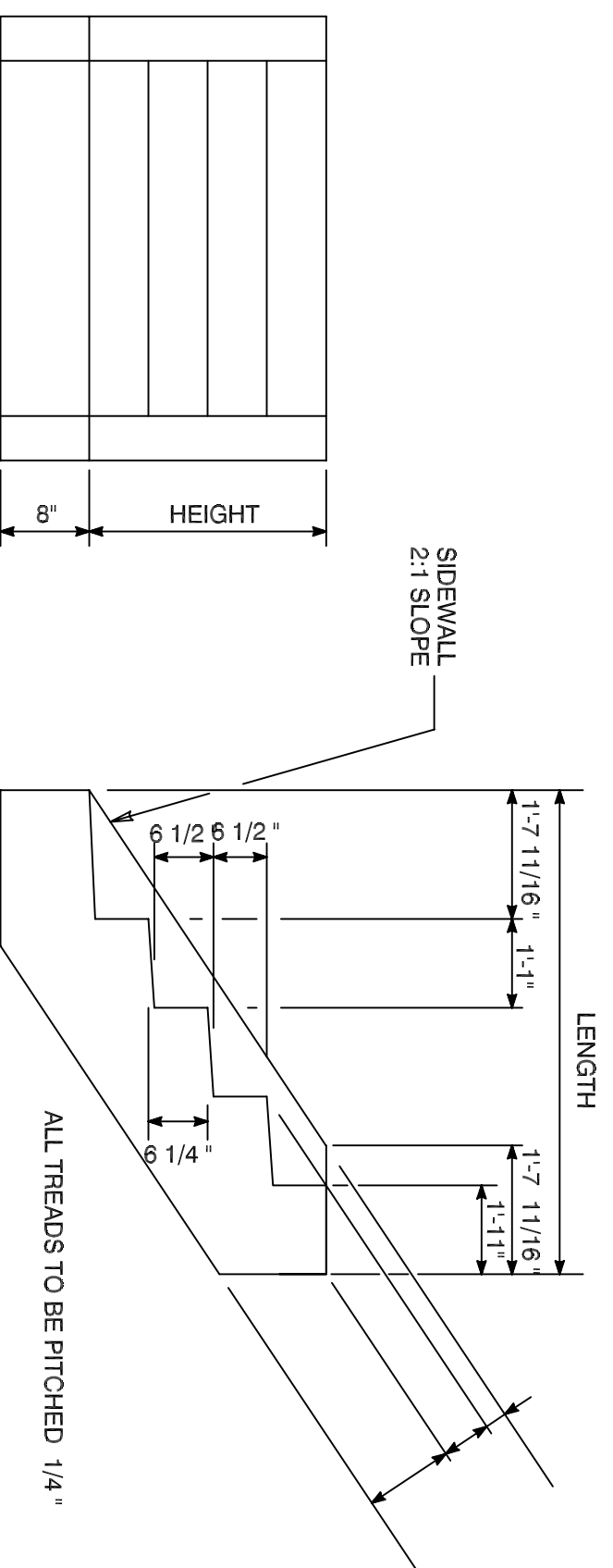
<b>City of Hartford, Connecticut</b> Department of Public Works Standard Streetscape Details Ornamental Signs and Poles		Sheet No. File Name SS-7.DWG
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**GENERAL NOTES:**

1. ALL CONSTRUCTION TO MEET LOCAL, STATE AND FEDERAL BUILDING CODES
2. HAND RAILS ARE REQUIRED ON BOTH SIDES OF ALL RESIDENTIAL STAIRS WITH FOUR OR MORE RISERS
3. HAND RAILS SHALL BE 1 1/2" DIAMETER, SCHEDULE 40 GALVANIZED PIPE.
4. INTERMEDIATE POSTS SHALL BE NO MORE THAN 72" APART.
5. THE RAILING BASE CONNECTIONS SHALL BE DESIGNED TO PROVIDE STRENGTH FOR AN 200 LB. FORCE APPLIED IN ANY LOCATION OR DIRECTION ON THE RAIL.



**STEPS CONFORMING TO 2:1 SLOPE**

HEIGHT	LENGTH	NUMBER RISERS	VOLUME OF STEPS, CU YDS.	HEIGHT	LENGTH	NUMBER RISERS	VOLUME OF STEPS, CU YDS.
6 1/2"	2-8 11/16"	1	0.453	4'-10 1/2"	11'-4 11/16"	9	2.75
1'-1"	3-9 11/16"	2	0.741	5'-5"	12'-5 11/16"	10	3.037
1'-7 1/2"	4'-10 11/16"	3	1.028	5'-11 1/2"	13'-6 11/16"	11	3.325
2'-2"	5'-11 11/16"	4	1.315	6'-6"	14'-7 11/16"	12	3.612
2'-8 1/2"	7'-11 11/16"	5	1.602	7'-0 1/2"	15'-8 11/16"	13	3.899
3'-3"	8'-11 11/16"	6	1.889	7'-7"	16'-9 11/16"	14	4.186
3'-9 1/2"	9'-11 11/16"	7	2.176	8'-1 1/2"	17'-10 11/16"	15	4.473
4'-4"	10'-11 11/16"	8	2.463	8'-8"	18'-11 11/16"	16	4.76

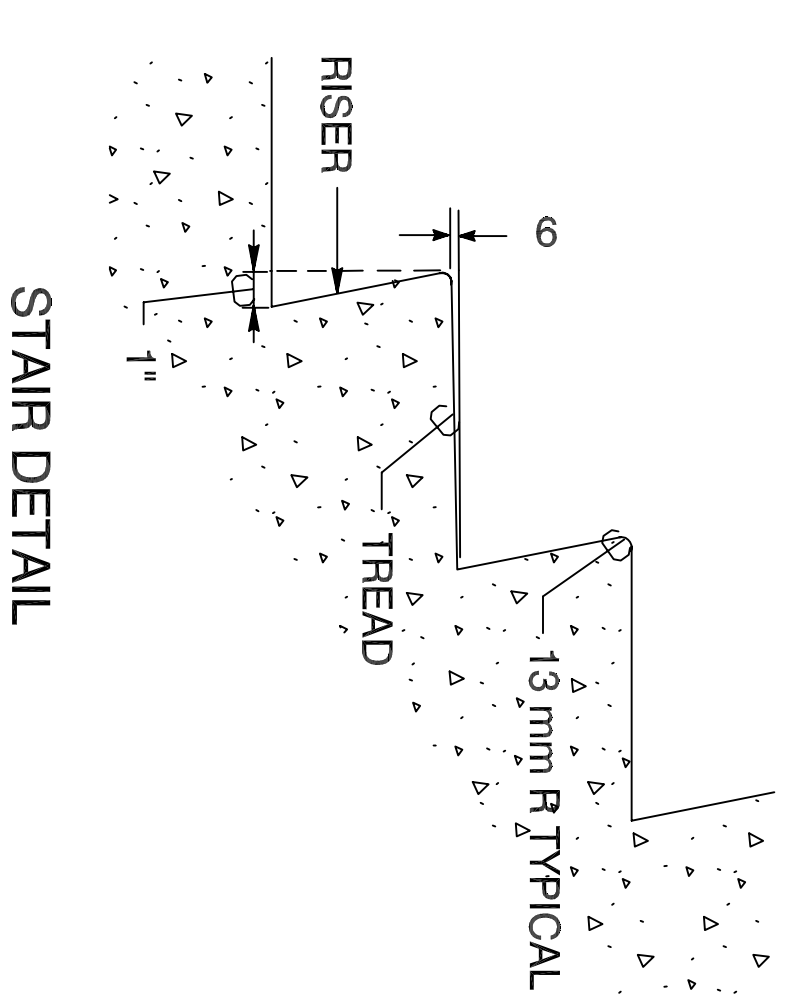
**STEPS CONFORMING TO 1 1/2 : 1 SLOPE**

HEIGHT	LENGTH	NUMBER RISERS	VOLUME OF STEPS, CU YDS.	HEIGHT	LENGTH	NUMBER RISERS	VOLUME OF STEPS, CU YDS.
0'-8"	2-5 3/8"	1	.571	6'-0"	10-5 3/8"	9	3.027
1'-4"	3-5 3/8"	2	.878	6'-6"	11-5 3/8"	10	3.33
2'-0"	4-5 3/8"	3	1.185	7'-4"	12-5 3/8"	11	3.64
2'-8"	5-5 3/8"	4	1.492	8'-0"	13-5 3/8"	12	3.95
3'-4"	6-5 3/8"	5	1.799	8'-6"	14-5 3/8"	13	4.26
4'-0"	7-5 3/8"	6	2.106	9'-4"	15-5 3/8"	14	4.56
4'-8"	8-5 3/8"	7	2.413	10'-0"	16-5 3/8"	15	4.87
5'-4"	9-5 3/8"	8	2.720	10'-8"	17-5 3/8"	16	5.18

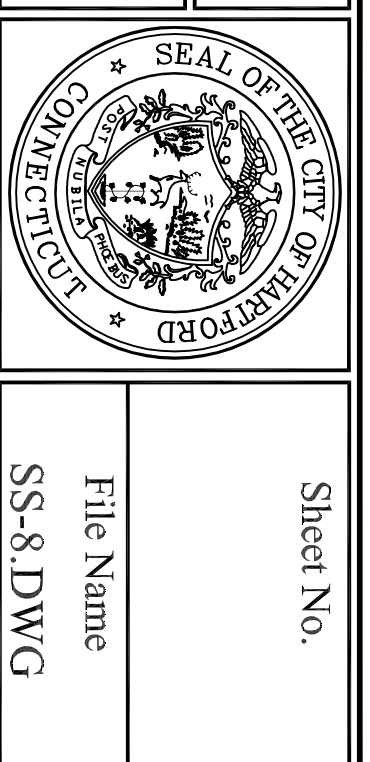
ADD 0.287 CU YDS. FOR EACH ADDITIONAL RISER  
LIMITATIONS ON RISERS PER SECTION SHALL BE GOVERNED BY THE APPLICABLE BUILDING CODE

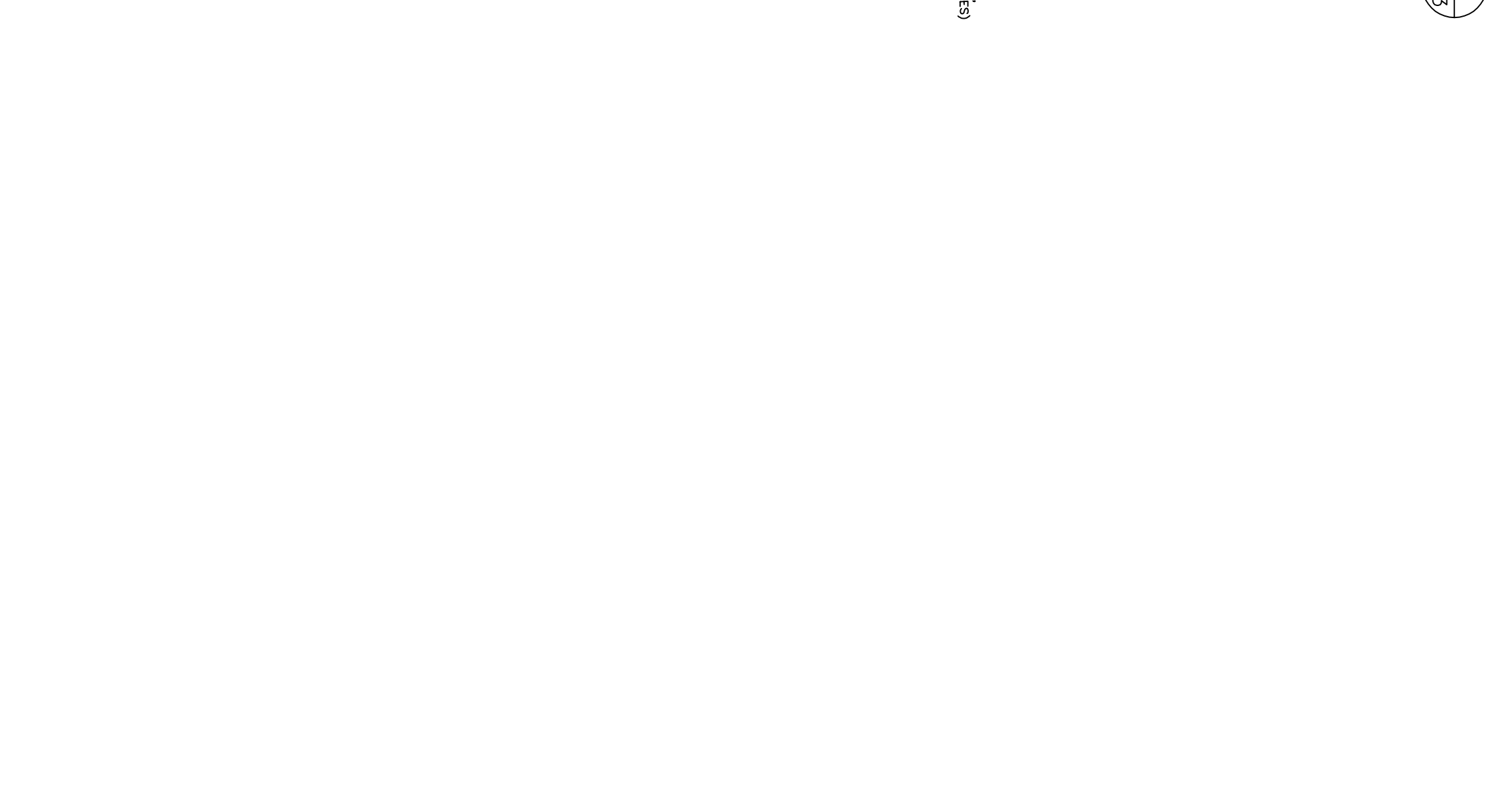
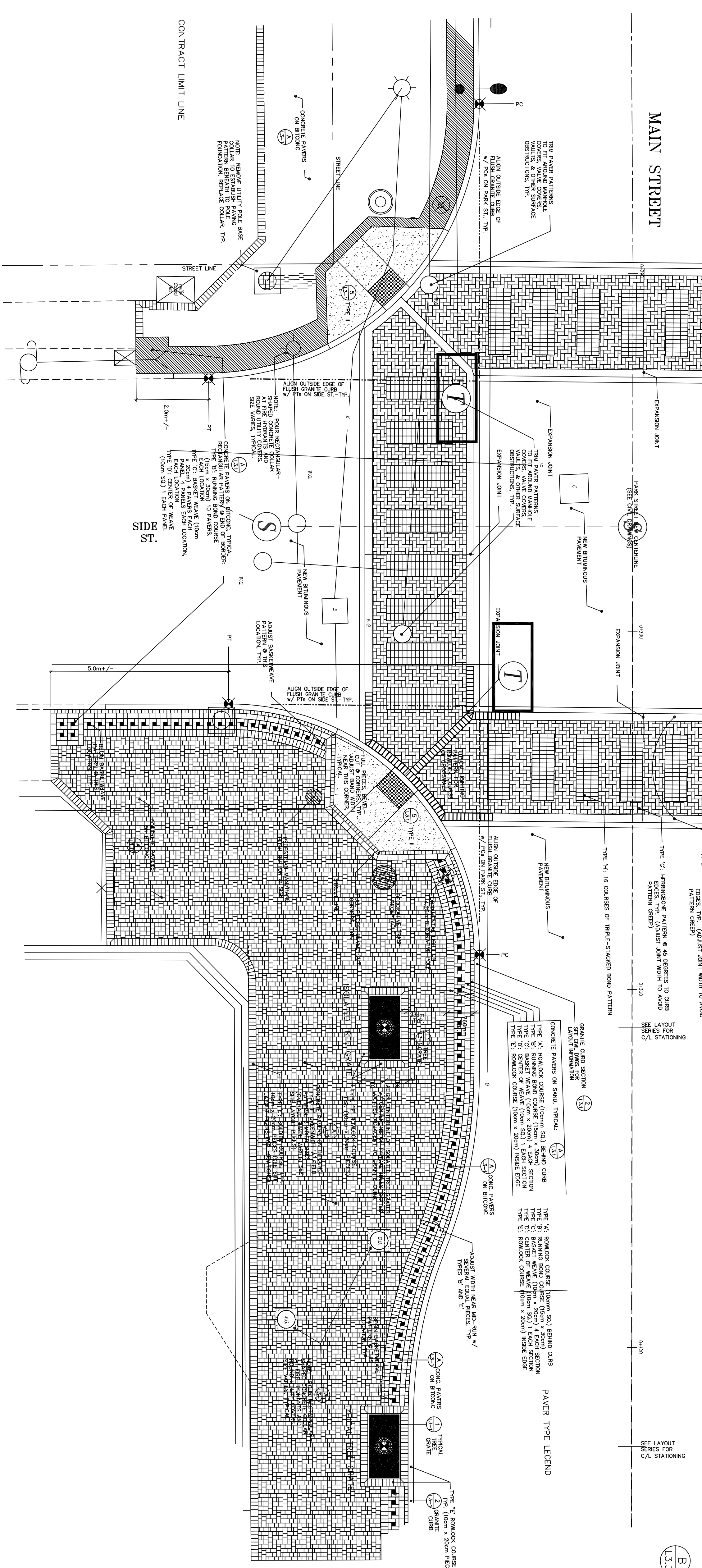
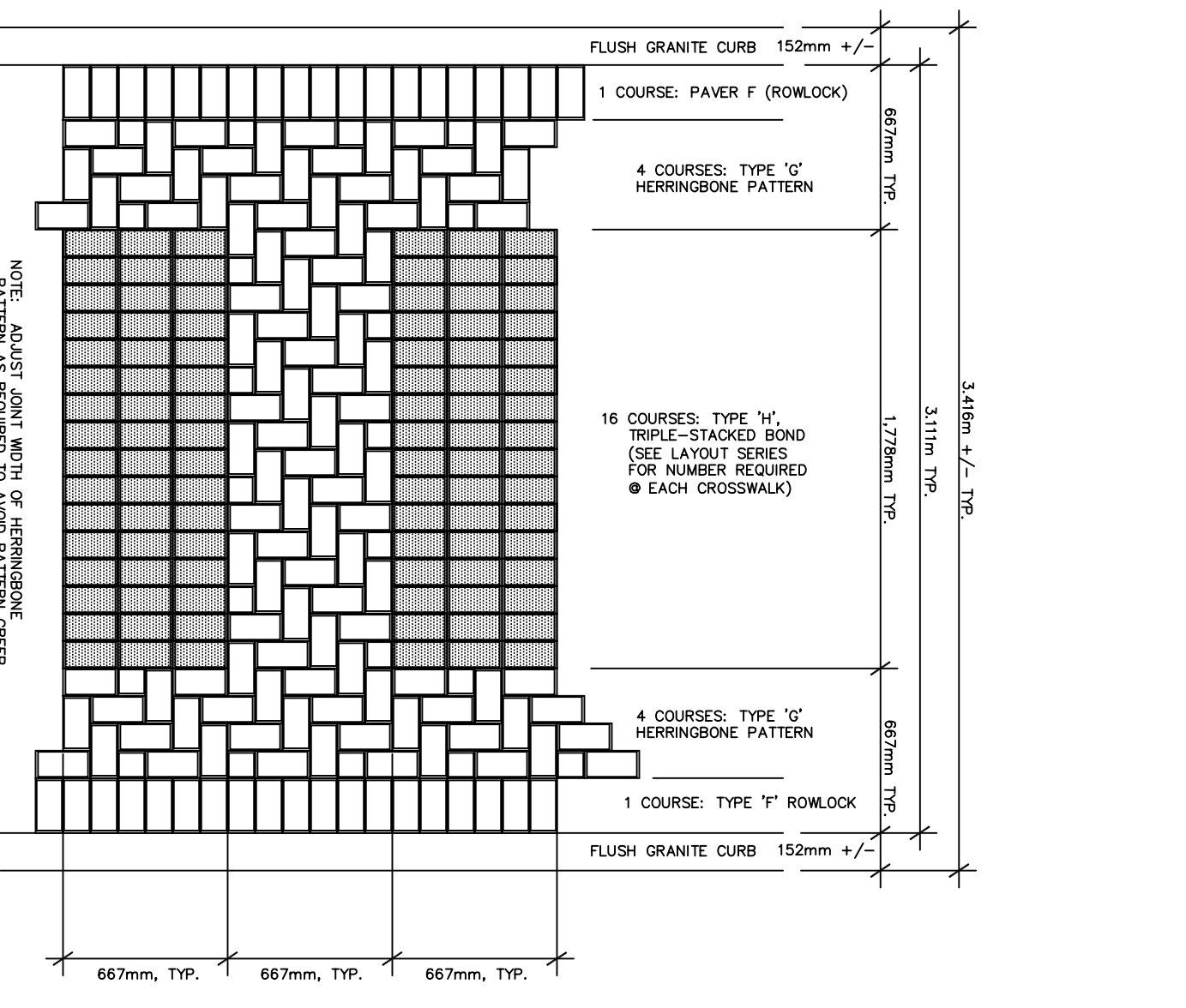
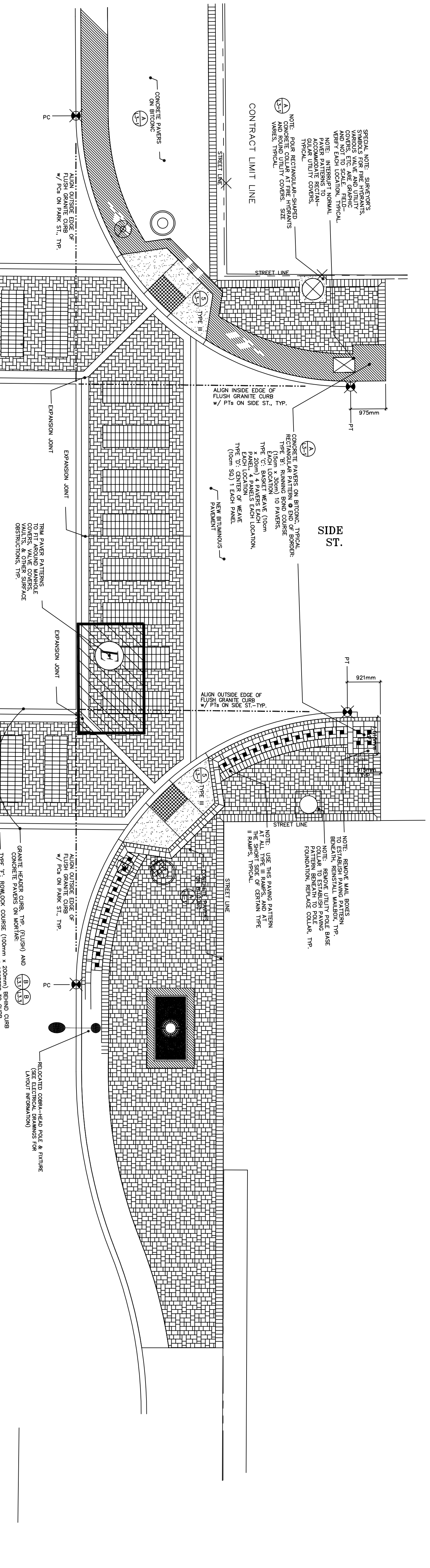
LIMITATIONS ON RISERS PER SECTION SHALL BE GOVERNED BY THE APPLICABLE BUILDING CODE

**CONCRETE STEPS**



<p>Revisions</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">By</th> <th style="width: 15%;">Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	By	Date											<p>Notice</p> <p>Manual revisions to this drawing are prohibited. The use of this drawing by any corporation, or by any person, for any reason, without written authorized consent of The City of Hartford is prohibited.</p>	<p>Sign-Offs</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">By</th> <th style="width: 10%;">Date</th> </tr> </thead> <tbody> <tr> <td>Drawn</td> <td> </td> </tr> <tr> <td>Checked</td> <td> </td> </tr> <tr> <td>Recommended</td> <td> </td> </tr> <tr> <td>Approved</td> <td> </td> </tr> <tr> <td>Recorded</td> <td> </td> </tr> </tbody> </table>	By	Date	Drawn		Checked		Recommended		Approved		Recorded		<p>Standard Drawing No. SS-8</p> <p>Job No.</p> <p>Date January 2005</p>	<p><b>City of Hartford, Connecticut</b> Department of Public Works</p> <p><b>Standard Streetscape Details</b> Concrete Stair Units</p>	<p>Sheet No.</p> <p>File Name SS-8-DWG</p>
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Revisions	By	Date

Notice

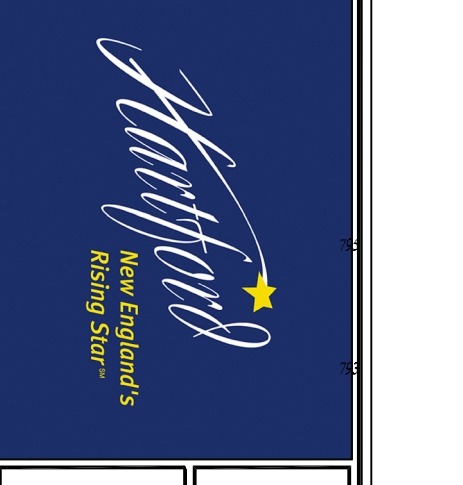
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Sign-Offs	By	Date
Drawn		
Checked		
Recommended		
Approved		
Recorded		

Standard Drawing No. SS-9

Job No.

Date January 2005



City of Hartford, Connecticut  
 Department of Public Works  
 Standard Streetscape Details  
 Typical Intersection Layout Plan



Sheet No.  
 File Name  
 SS-9.DWG