

COND	Condition
CONN	Connect/Connection
CONSTR	Construction
CONT	Continuous
CORP	Corporation
COS	City of Seattle
CPEP	Corrugated Polyethylene Pipe
CR	Cross, Curb Radius
CSB	Chief Seattle Base
CSECP	Construction Stormwater & Erosion Control Plan
CULV	Culvert
CW	Concrete Walk
CY	Cubic Yard
DB	Direct Burial Cable
DC	Direct Current
DCVA	Double Check Valve Assembly
DEPT	Department
DGV	District Gate Valve
DIA 0	Diameter
DIP or DI	Ductile Iron Pipe
DIPRA	Ductile Iron Pipe Research Assoc.
DR	Drive
DS	Downspout
DWG	Drawing
DWY	Driveway
E	East
EA	Each
ECB	Electrical Cable
ECC	Eccentric
ECD	Electrical Conduit
ED	Electrical Duct
EL/ELEV	Elevation
ELEC	Electric/Electrical

EMH	Electrical Maintenance Hole
ENCL	Enclosure
ENGR	Engineer
EOC	End of Curb
EQ	Equal
ESAL	Equivalent Single Axle Loads
ESMT	Easement
EV	Electrical Vault
EVC	End of Vertical Curb
EW	Each Way
EX	Existing
EXP	Expansion
FACB	Fire Alarm Cable
FAHH	Fire Alarm Handhole
FC	Face of Curb
FCS	Flow Control Structure
FDN	Foundation
FF	Far Face, Finished Floor
FG	Finished Grade
FIG	Figure
FIPT	Female Iron Pipe Thread
FL	Flow Line
FLG	Flange
FLR	Floor
FLT	Flat Bar
FM	Force Main
FO or FOC	Fiber Optics
FS	Far Side
FT	Feet
FTB	Fluidized Thermal Backfill
FTG	Footing
G	Gas
G REG	Gas Regulator

REF STD SPEC SEC 1-01.2



City of Seattle

NOT TO SCALE

ABBREVIATIONS

MAX	Maximum
MB	Mailbox
MCV	Manual Control Valve
MDV	Manual Drain Valve
MH	Maintenance Hole
MIC	Monument in Case
MIN	Minimum
MIPT	Male Iron Pipe Thread
MISC	Miscellaneous
MJ	Mechanical Joint
ML \overline{M}	Monument Line
MNRL AGG	Mineral Aggregate
MOD	Modify/Modified
MON	Monument
MW	Monitor Well
N	North
NAD	North American Datum
NAVD	North American Vertical Datum
NF	Near Face
NGVD	National Geodetic Vertical Datum
NIC	Not in Contract
NO	Number
NOM	Nominal
NS	Near Side
NTS	Not To Scale
OC	On Center
OD	Outside Diameter/Dimension
OF	Outside Face
OH	Overhead
PAV	Pavement
PC	Point of Curvature
PCC	Point of Compound Curve
PCW	Pervious Concrete Walk

PDP	Perforated Drain Pipe
PE	Plain End
PED	Pedestrian
PG	Performance Grade
PH	Phase
PI	Point of Intersection
PL	Plate, Place, Polyethylene
\overline{P}	Property Line
POC	Point on Curve
PP	Power Pole
PPB	Pedestrian Push Button
PR	Pair
PRC	Point of Reverse Curve
PROP	Proposed
PRKG	Parking
PRV	Pressure Reducing Valve
PS	Pipe Sewer Combined
PSD	Pipe Storm Drain
PSDD	Pipe Storm Drain Detention
PSI	Pounds per Square Inch
PSIA	Pounds per Square Inch Absolute
PSIG	Pounds per Square Inch Gauge
PSS	Pipe Sewer Sanitary
PT	Point of Tangency
PVB	Pressure Vacuum Breaker
PVC	Polyvinyl Chloride
PVT	Private
QTY	Quantity
R	Radius
R&R	Remove & Replace
R/W	Right of Way
RCP	Reinforced Concrete Pipe
RD	Roof Drain

REF STD SPEC SEC 1-01.2

— new abbreviation added



City of Seattle

NOT TO SCALE

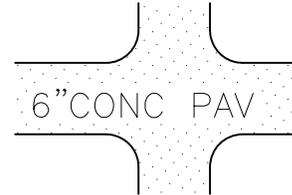
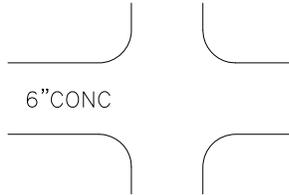
ABBREVIATIONS

ITEM

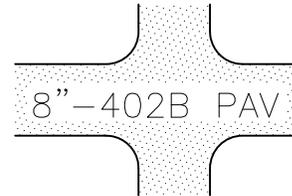
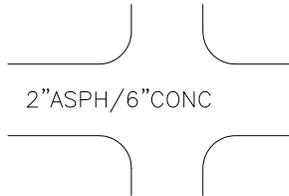
EXISTING

PROPOSED

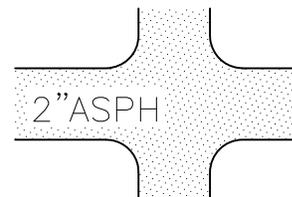
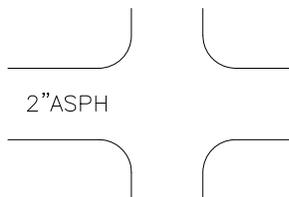
Cement Concrete Pavement



Asphalt Concrete Pavement



Asphalt Concrete Surfacing

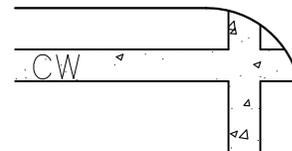
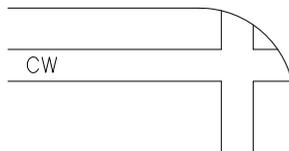


Curb



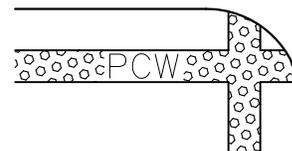
TYPE 410C CURB

Cement Concrete Walk



Pervious Concrete Walk

added



REF STD SPEC SEC



City of Seattle

NOT TO SCALE

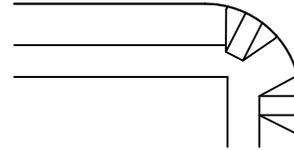
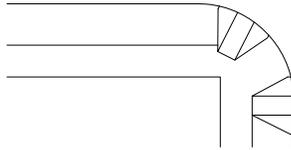
STANDARD SYMBOLS
PAVING

ITEM

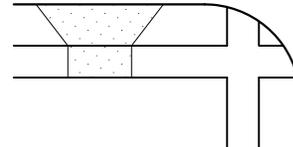
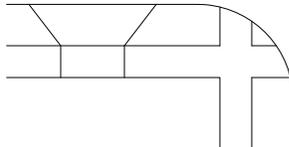
EXISTING

PROPOSED

Curb Ramp

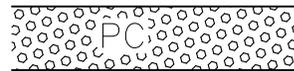


Conc Dwy



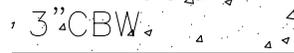
Pervious Concrete Surface

added



Cement Concrete Bike Way

3"CBW



Asphalt Concrete Bike Way

3"ABW

3"ABW

Grading

GRADED

TO BE GRADED

REF STD SPEC SEC



City of Seattle

NOT TO SCALE

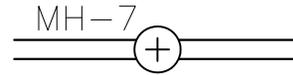
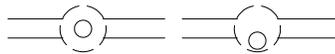
STANDARD SYMBOLS
PAVING

ITEM

EXISTING

PROPOSED

Maintenance Holes



Inlet Type 250A



Inlet Type 250B



Inlet Type 252



Inlet Type 268



Catch Basin round inlet top



Private CB & Inlet



Catch Basin Type 151
(pre 1985)



Catch Basin Type 240A



Catch Basin Type 240B



Catch Basin Type 240C



Catch Basin Type 240D



Catch Basin Type 241



Catch Basin Type 242A



Catch Basin Type 242B



Junction Box Type 277A



Junction Box Type 277B



Area Drain



new symbols

REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
SEWER & DRAINAGE

standard plan revised due to new symbols on 003g

ITEM	EXISTING	PROPOSED
Sand Box		
Clean Out		
Concrete Culvert		
Pipe Sewer Combined <1'-0"Dia		
Pipe Sewer Combined ≥1'-0"Dia		
Side Sewer Combined		
Pipe Sewer Sanitary <1'-0"Dia		
Pipe Sewer Sanitary ≥1'-0"Dia		
Side Sewer Sanitary		
Pipe Storm Drain <1'-0"Dia		
Pipe Storm Drain ≥1'-0"Dia		

REF STD SPEC SEC



City of Seattle

NOT TO SCALE

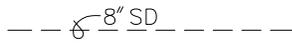
STANDARD SYMBOLS
SEWER & DRAINAGE

ITEM

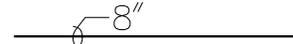
EXISTING

PROPOSED

Service Drain



Inlet & CB Connection



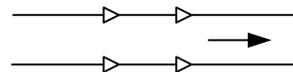
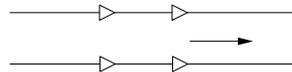
Open Ended Pipe



Ditch



Stream



standard plan revised due to new symbols on 003g

REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
SEWER & DRAINAGE

ITEM

EXISTING

PROPOSED

Bench Mark (found or set)



Brass Plug/Cap (found or set)



Hub/Tack (found or set)



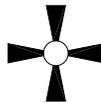
Monument in Case (found or set)



Conc. Mon. (found or set)



Section Corner (found or set)

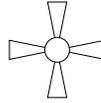


added

Quarter Corner (found or set)



Section Corner (calculated)



Quarter Corner (calculated)



Rebar/Cap, Pipe/Cap Rebar, Iron Pipe (found or set)



Tack/Lead, Tack PK Nail, Spike (found or set)



Bench Mark (not found)



Brass Plug/Cap (not found)



MIC. (not found)



Conc. Mon. (not found)



Rebar/Cap, Pipe/Cap Rebar, Iron Pipe (not found)



Tack/Lead, Tack PK Nail, Spike (not found)



Survey Shot Point



REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
TOPOGRAPHIC & MISC

ITEM

EXISTING

PROPOSED

Center Line



Monument Line



renumbered

Survey Line



Right of Way Line



Lot & Ownership Line



Permanent Easement Line



Temp Const Easement Line



Vacated Street or Alley



State Highway Limited Access Line



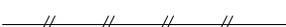
Building



Chain Link Fence



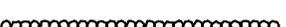
Wood Fence



Guardrail



Rock Facing



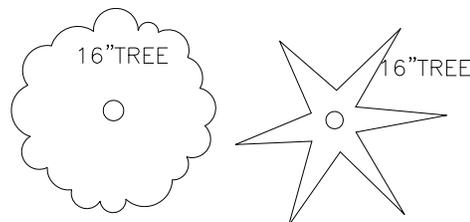
Rock Facing



Riprap



Trees



PER DRAWINGS

REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
TOPOGRAPHIC & MISC

ITEM

EXISTING

PROPOSED

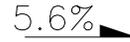
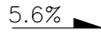
Shrub or Bush



Ground, Grade Line



Grade (arrow downhill)



Rail Road Tracks



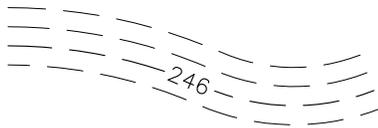
City Limits



Slope Line

SLOPE LINE

Contours



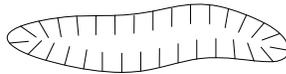
Slope Angle
Horiz:Vert

H:V

Vertical Curve



Depression



Stump



Top of Cut Toe of Fill



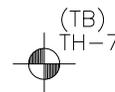
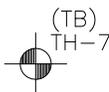
Dimension Line



Match Line



Test Hole & Number
(test boring)



Bench Mark



REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
TOPOGRAPHIC & MISC

ITEM

EXISTING

PROPOSED

Monitor Well



Street Name Sign



US Mail Box



Private Mail Box



Bollard



Posts



Parking Meter & Pay Station



Rectangular Casting



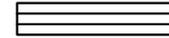
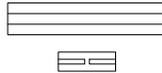
Circular Casting



Column



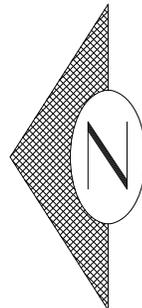
Jersey Barrier & Eco Block



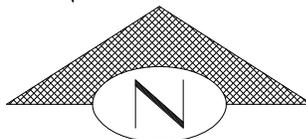
Tree Pit



North Arrow horizontal



North Arrow vertical



REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
TOPOGRAPHIC & MISC

ITEM

EXISTING

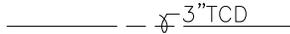
PROPOSED

Telephone Cable
(direct burial)

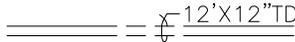


renumbered

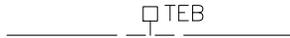
Telephone Conduit



Telephone Duct



Telephone Enclosure



Telephone Maintenance
Hole



Telephone Pole



Telephone Handhole



Television Cable
(direct Burial)



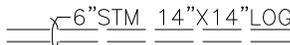
Television Handhole



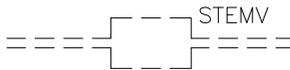
Telegraph Maintenance
Hole



Steam Log



Steam Vault



Gas Main



Gas Valve



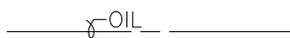
Gas Meter



Gas Regulator



Petroleum or Oil



Abandon(ed)



REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
PRIVATE UTILITIES

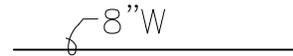
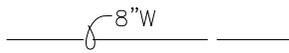
ITEM

renumbered

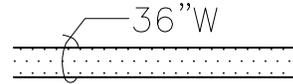
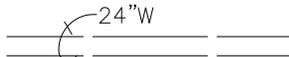
EXISTING

PROPOSED

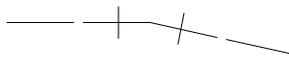
Watermain
<1'-0"Dia



Watermain
≥1'-0"Dia



11 1/4° Bend w/
Conc Blocking



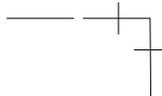
22 1/2° Bend



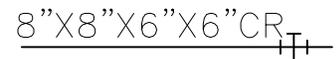
45° Bend



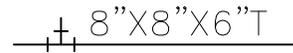
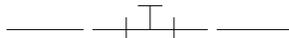
90° Bend



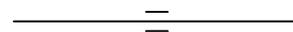
Cross



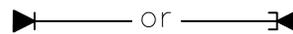
Tee



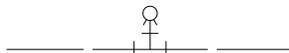
Pipe Sleeve



Plug w/ Conc
Blocking



Hydrant



Water Meter



Valve Box



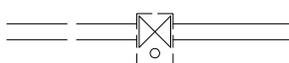
Gate Valve



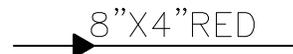
Gate Valve
w/ Chamber



Gate Valve
w/ Vault Chamber



Reducer



REF STD SPEC SEC



City of Seattle

NOT TO SCALE

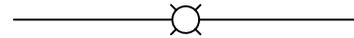
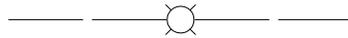
STANDARD SYMBOLS
WATER

ITEM

EXISTING

PROPOSED

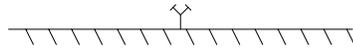
Air Valve



Blowoff



Fire Standpipe



Water Test Station



new std plan due to renumbering

Water Chamber



Sprinkler Head



Irrigation Valve



Angle Valve



Butterfly Valve



Ball Valve



Check Valve



Cone Valve



Globe Valve



Needle Valve



Plug Valve



Resilient Seal Gate Valve



Vertical Bend



Concrete Blocking



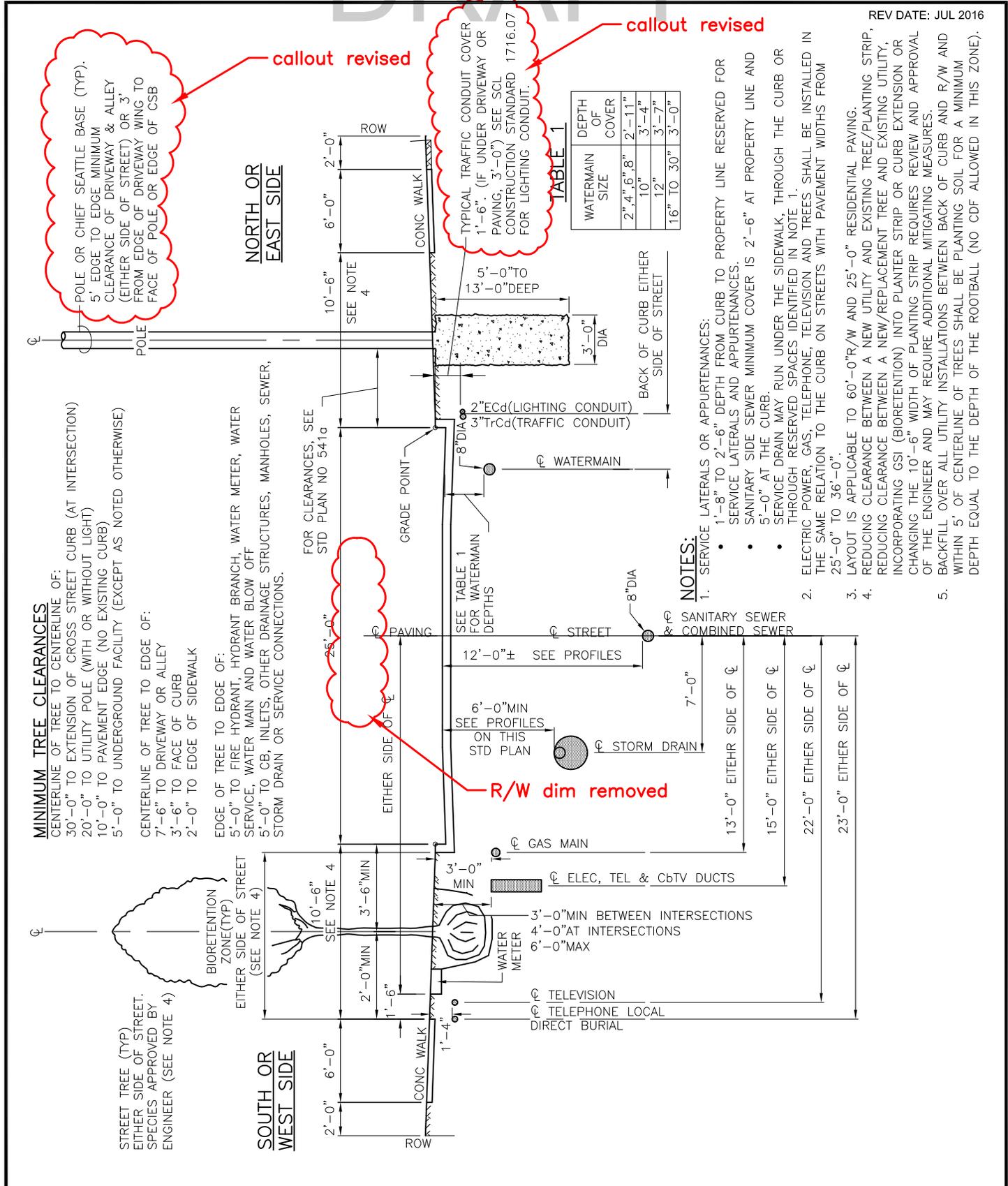
REF STD SPEC SEC



City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
WATER



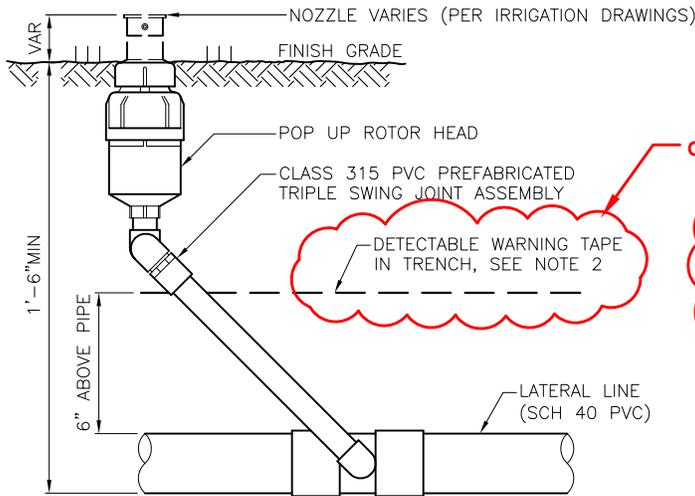
REF STD SPEC SEC 1-07.16, 1-07.17 & 1-07.28



City of Seattle

NOT TO SCALE

DESIRABLE LOCATIONS FOR UTILITIES (RESIDENTIAL STREET)



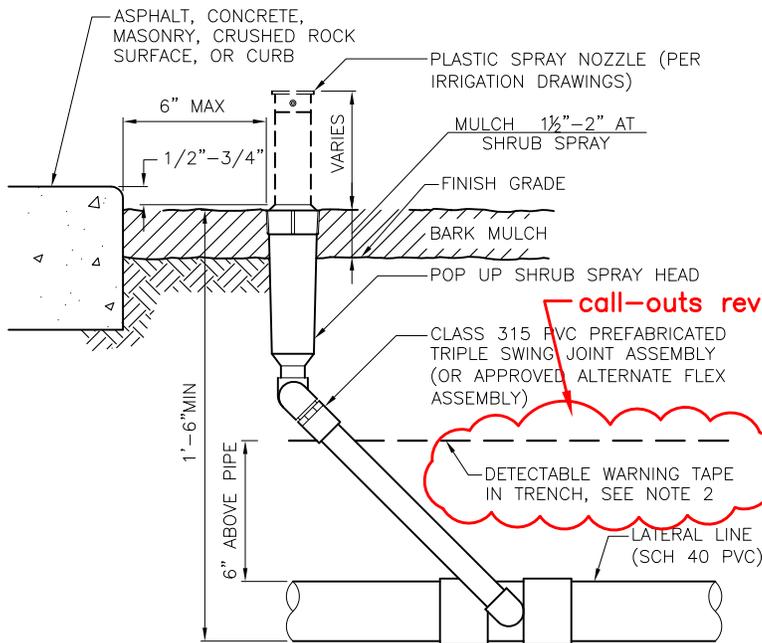
POP UP ROTOR HEAD
TURF AREAS

call-out revised

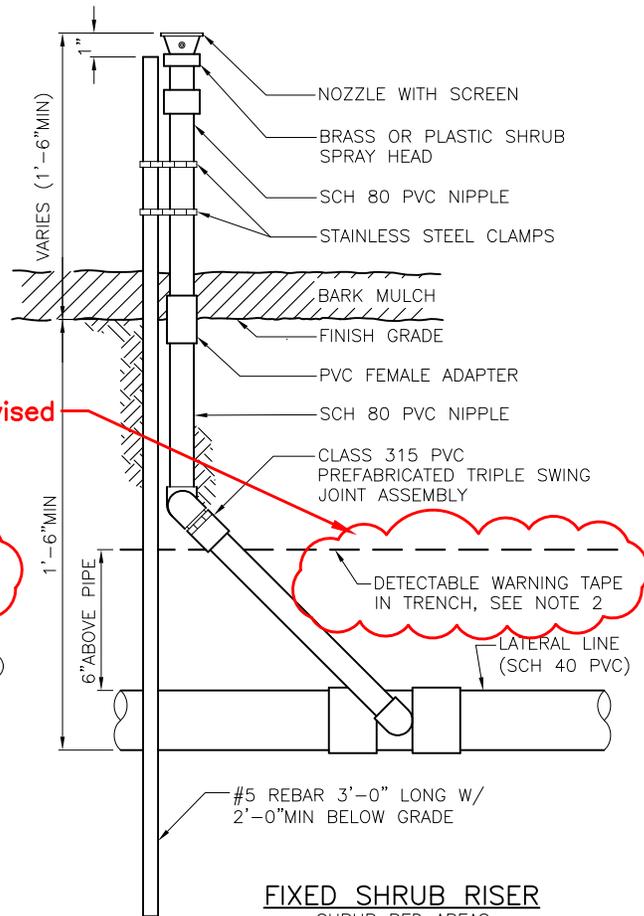
NOTE:

1. USE TEFLON TAPE ON ALL THREADED FITTINGS
2. DETECTABLE MARKING TAPE COLOR PER STANDARD SPECIFICATIONS SECTION 9-15.11 FOR POTABLE OR NON-POTABLE WATER

note 2 added



POP UP ROTOR HEAD
(SHRUB BED AREAS)
AT EDGE OF PAVEMENT



FIXED SHRUB RISER
SHRUB BED AREAS

call-outs revised

REF STD SPEC SEC 8-03

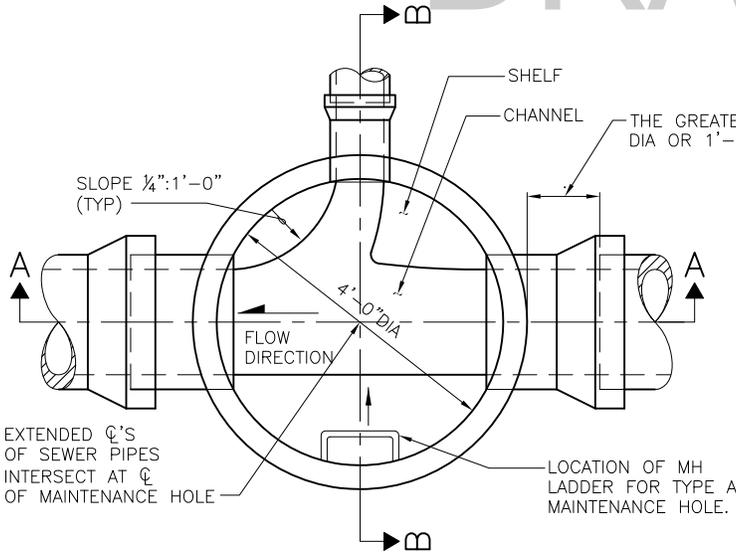


City of Seattle

NOT TO SCALE

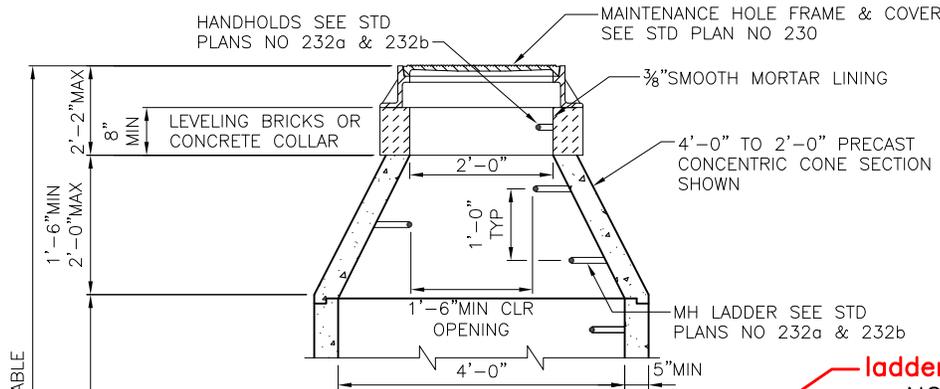
POP UP & FIXED IRRIGATION HEADS

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.25	0.17
30' MAX	0.31	0.22
40' MAX	0.36	0.25

PLAN VIEW
(TOP REMOVED)

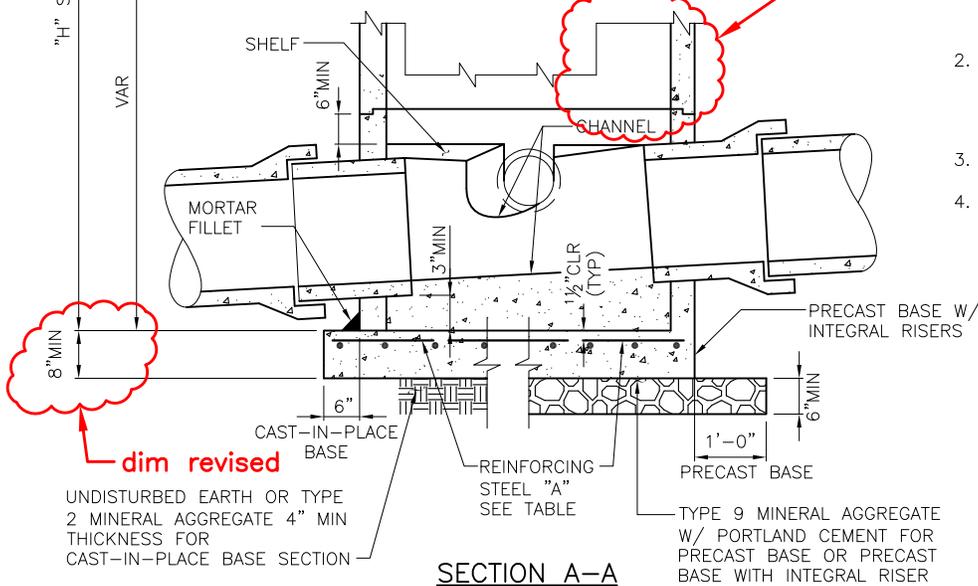


SECTION B-B

ladder step removed

NOTES:

1. MATERIALS: CONCRETE—CLASS 4000; REINFORCING STEEL—ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL — CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS SHALL CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 5 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 8 IN.



SECTION A-A

REF STD SPEC SEC 7-05

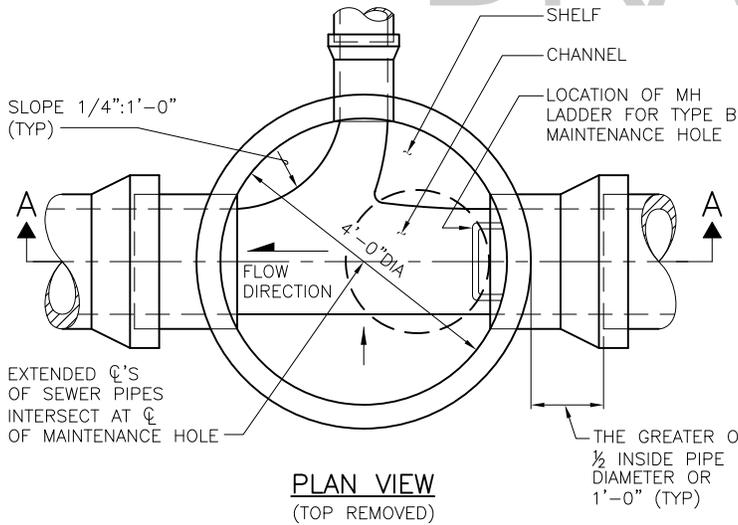


City of Seattle

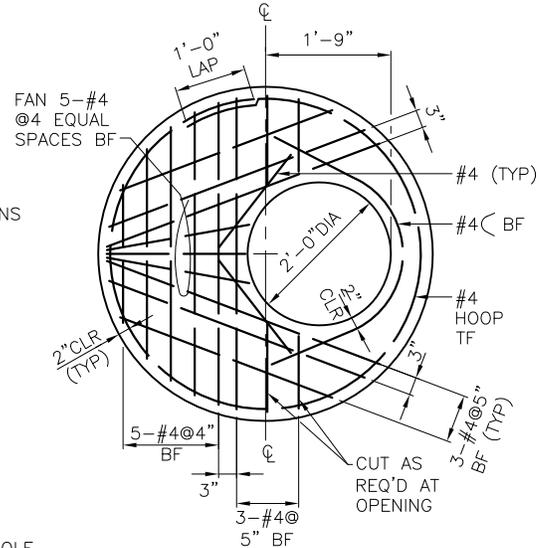
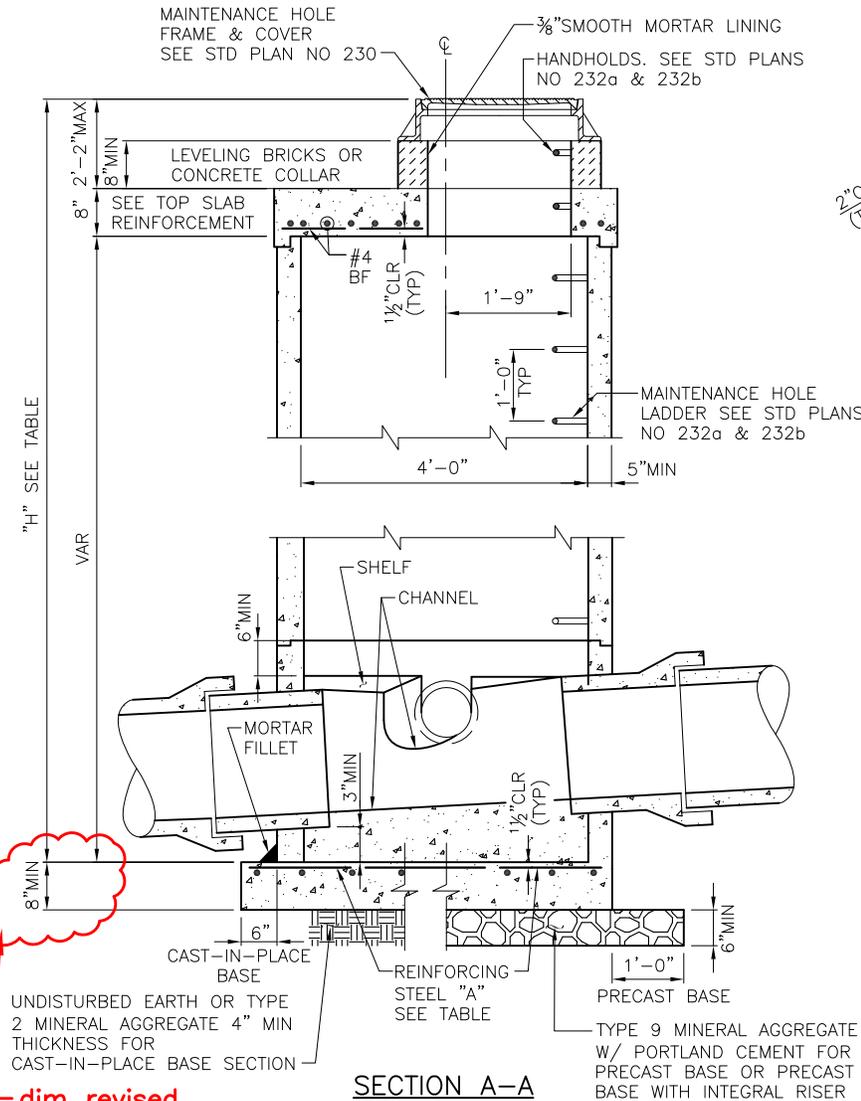
NOT TO SCALE

TYPE 204a MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.25	0.17
30' MAX	0.31	0.22
40' MAX	0.36	0.25



NOTES:

1. MATERIALS: CONCRETE—CLASS 4000; REINFORCING STEEL—ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL — CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 5 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 8 IN.

REF STD SPEC SEC 7-05

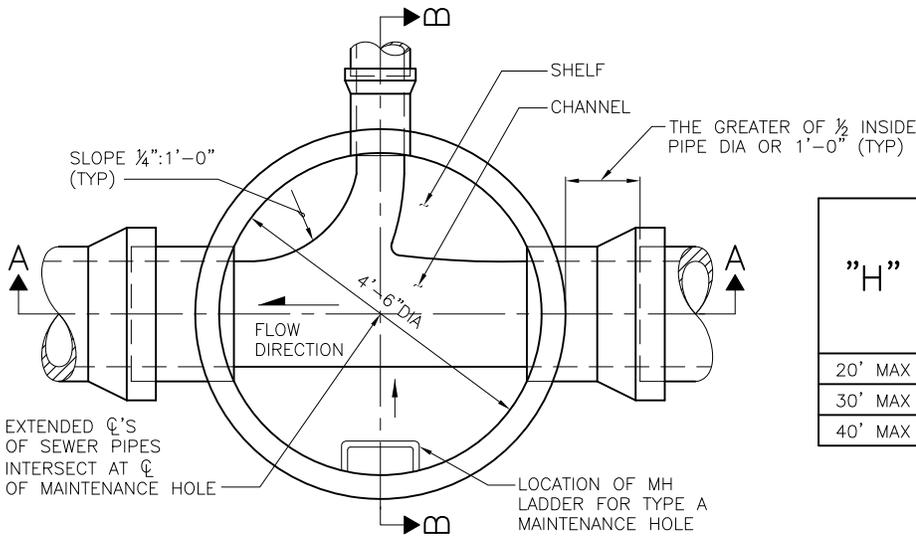


City of Seattle

NOT TO SCALE

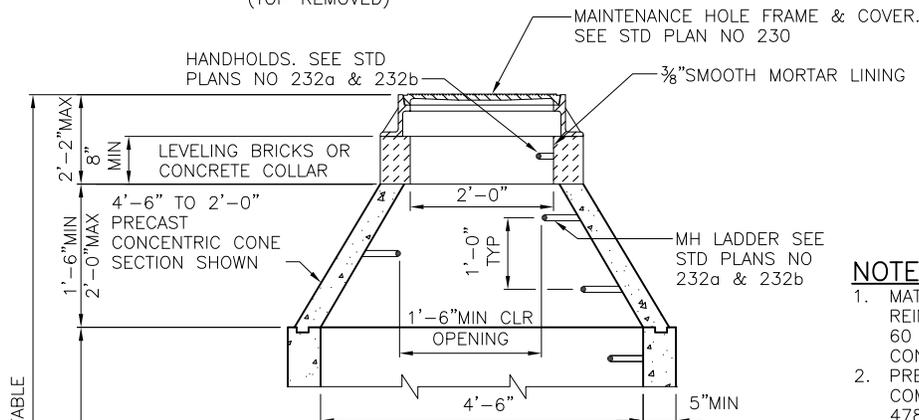
TYPE 204b MAINTENANCE HOLE

DRAFT



PLAN VIEW
(TOP REMOVED)

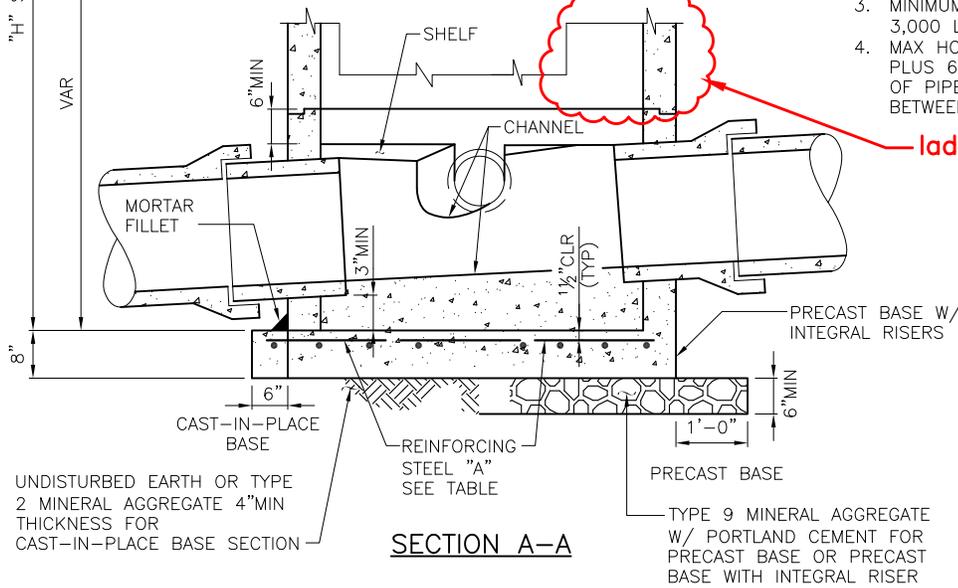
"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.29	0.21
30' MAX	0.36	0.26
40' MAX	0.42	0.31



SECTION B-B

NOTES:

1. MATERIALS: CONCRETE—CLASS 4000; REINFORCING STEEL—ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL — CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 6 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 8 IN.



SECTION A-A

REF STD SPEC SEC 7-05

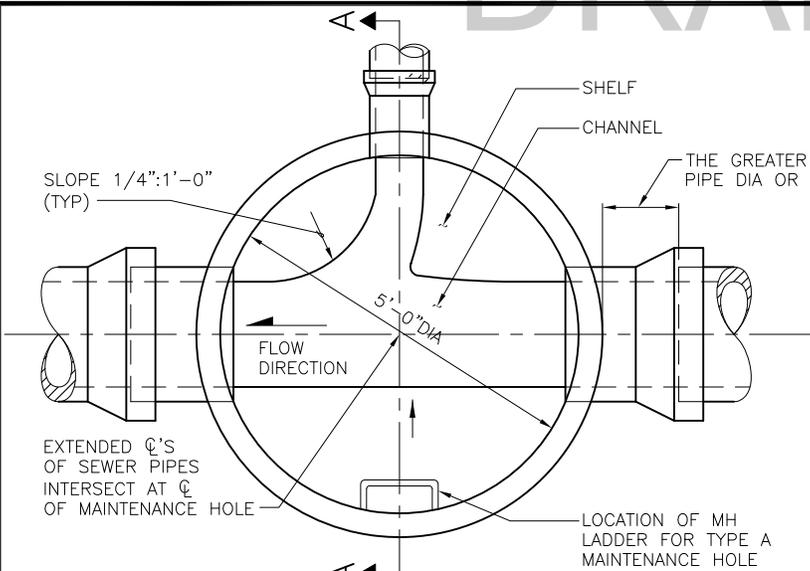


City of Seattle

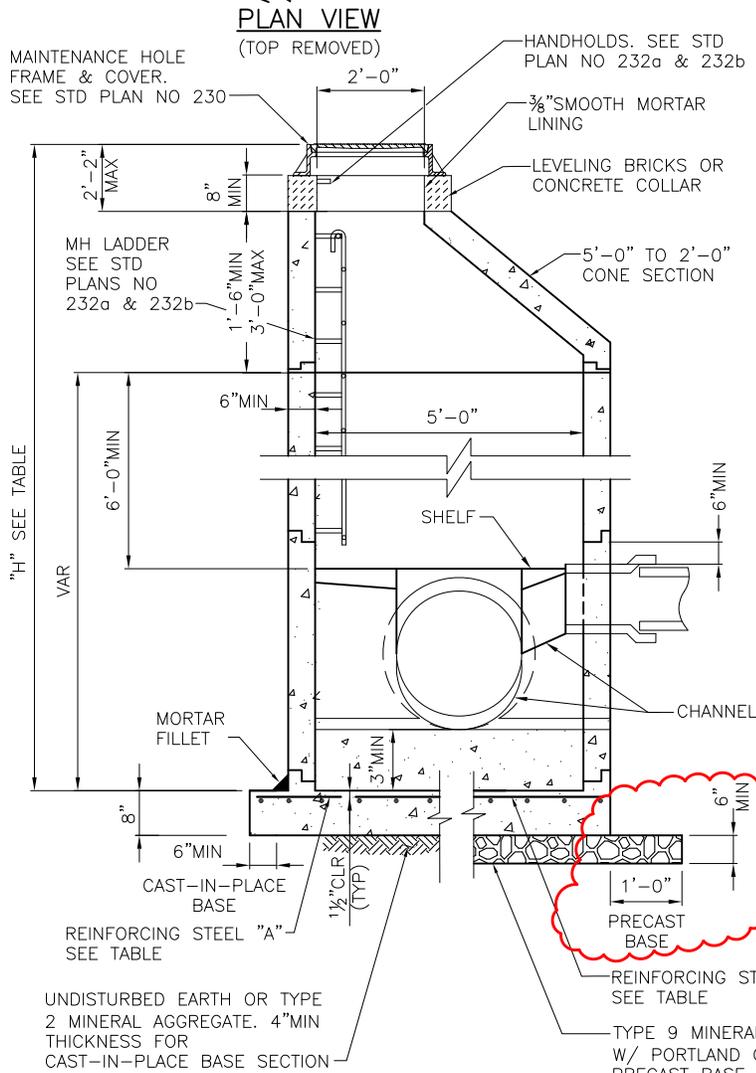
NOT TO SCALE

TYPE 204.5a MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.33	0.25
30' MAX	0.41	0.31
40' MAX	0.49	0.37



NOTES:

1. MATERIALS: CONCRETE—CLASS 4000; REINFORCING STEEL—ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL — CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 6 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 8 IN.

corrected base dimension

REF STD SPEC SEC 7-05

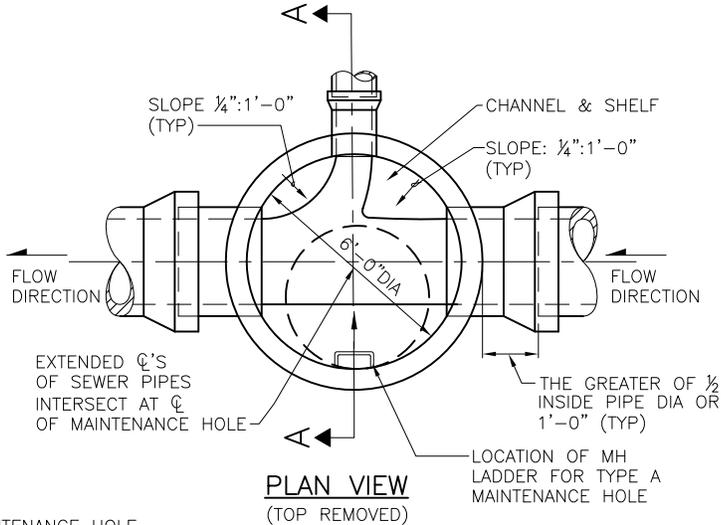


City of Seattle

NOT TO SCALE

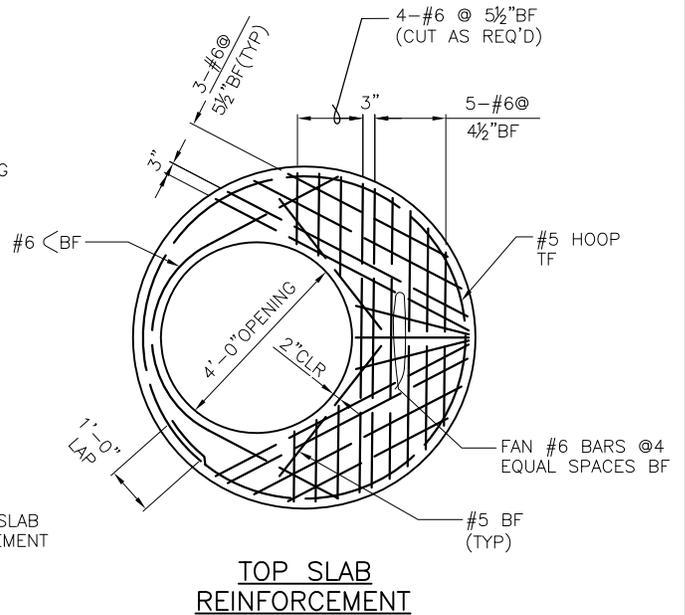
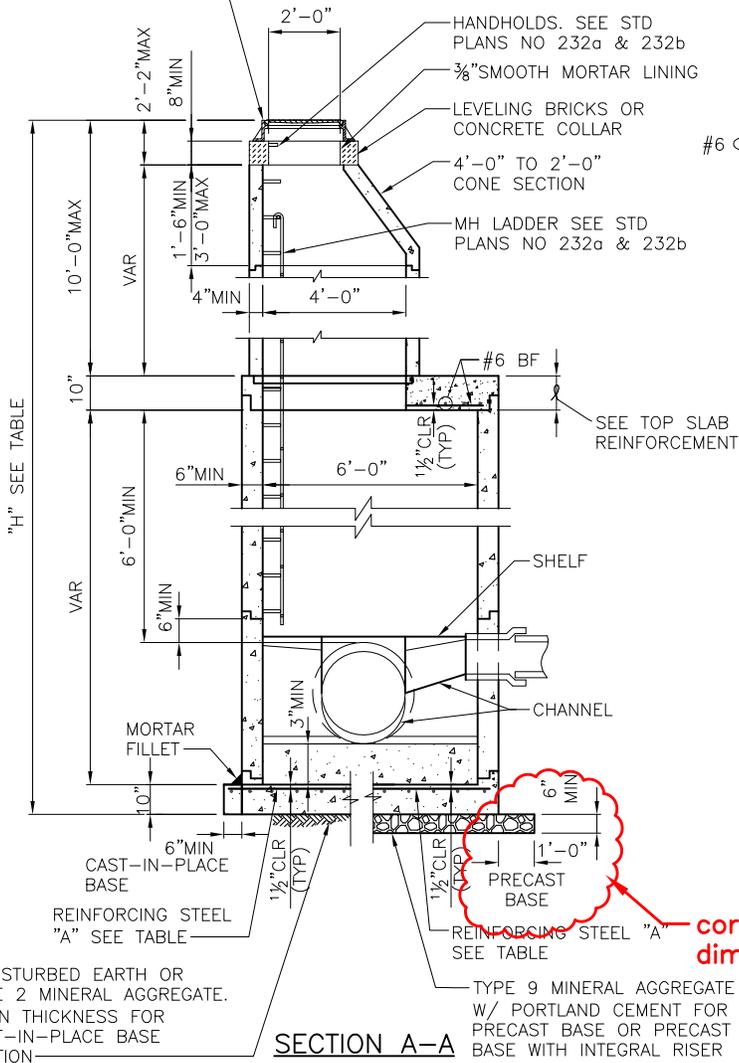
TYPE 205a MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.39	0.30
30' MAX	0.47	0.37
40' MAX	0.56	0.46

MAINTENANCE HOLE FRAME & COVER. SEE STD PLAN NO 230



NOTES:

1. MATERIALS: CONCRETE—CLASS 4000; REINFORCING STEEL—ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL — CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 7 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 12 IN.

corrected base dimension

REF STD SPEC SEC 7-05

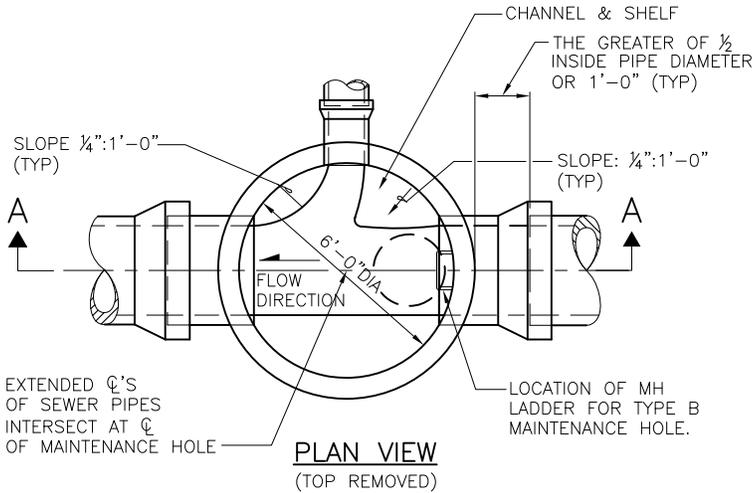


City of Seattle

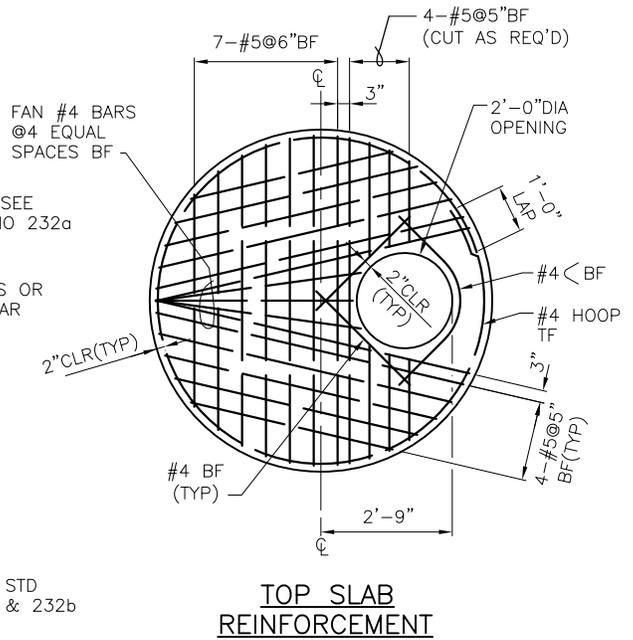
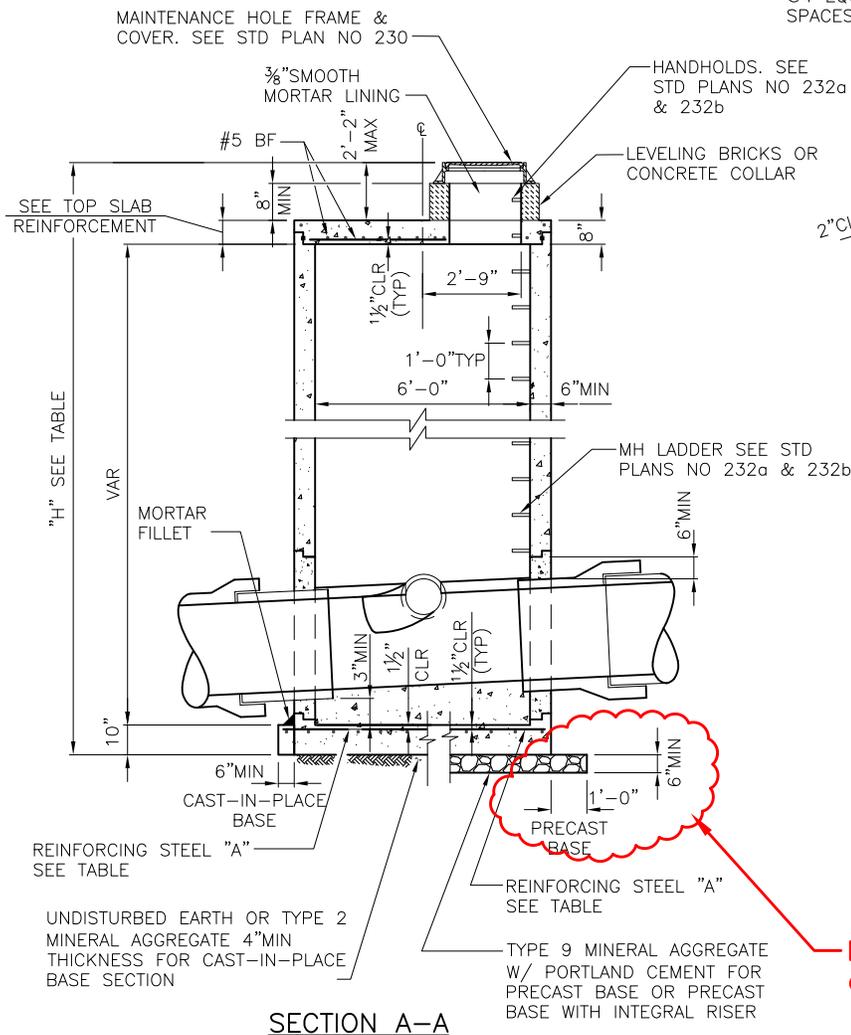
NOT TO SCALE

TYPE 206a MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.29	0.24
30' MAX	0.41	0.32
40' MAX	0.49	0.41



- NOTES:**
1. MATERIALS: CONCRETE—CLASS 4000; REINFORCING STEEL—ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL — CONCRETE CLASS 3000.
 2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
 3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
 4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 7 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 12 IN.

base dimension corrected

REF STD SPEC SEC 7-05

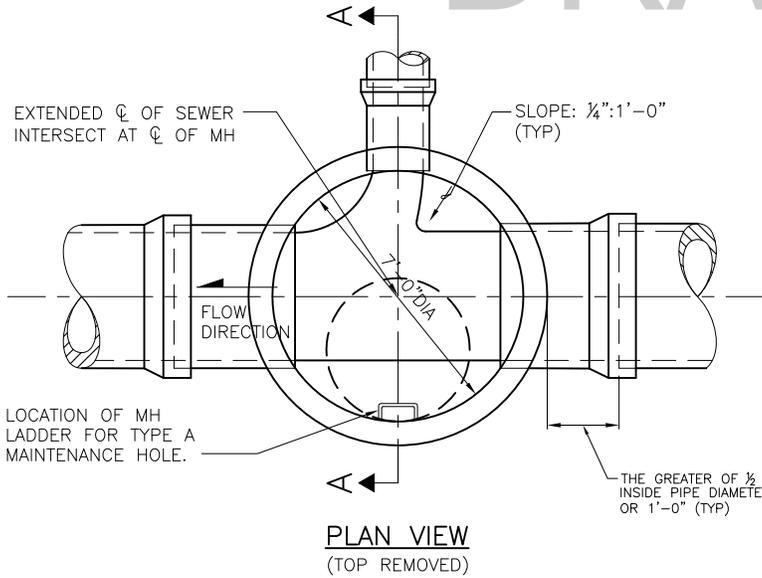


City of Seattle

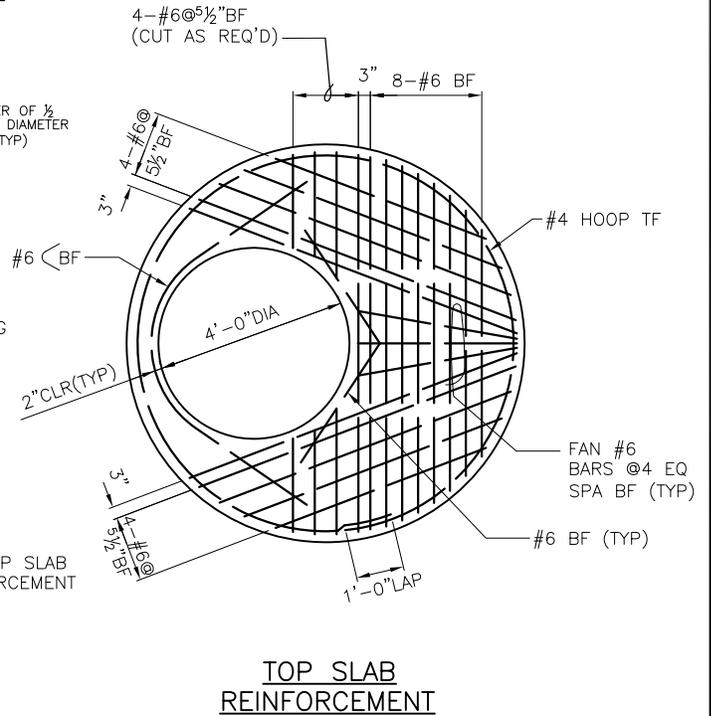
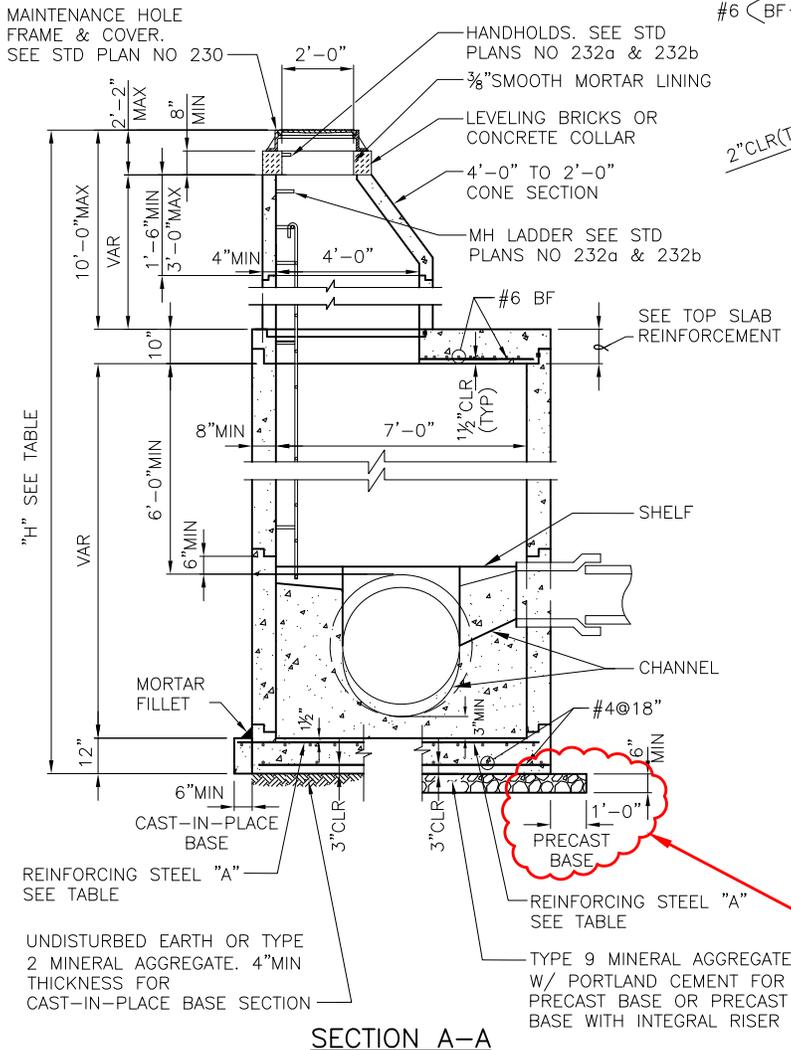
NOT TO SCALE

TYPE 206b MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.42	0.34
30' MAX	0.51	0.41
40' MAX	0.60	0.48



NOTES:

- MATERIALS: CONCRETE-CLASS 4000; REINFORCING STEEL-ASTM A615 GRADE 60 MIN; CHANNEL AND SHELF MATERIAL - CONCRETE CLASS 3000.
- PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
- MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
- MAX HOLE SIZE MUST BE OD OF PIPE PLUS 8 IN. MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3 IN. MIN CLEAR DISTANCE BETWEEN HOLES IS 12 IN.

base dimension corrected

REF STD SPEC SEC 7-05



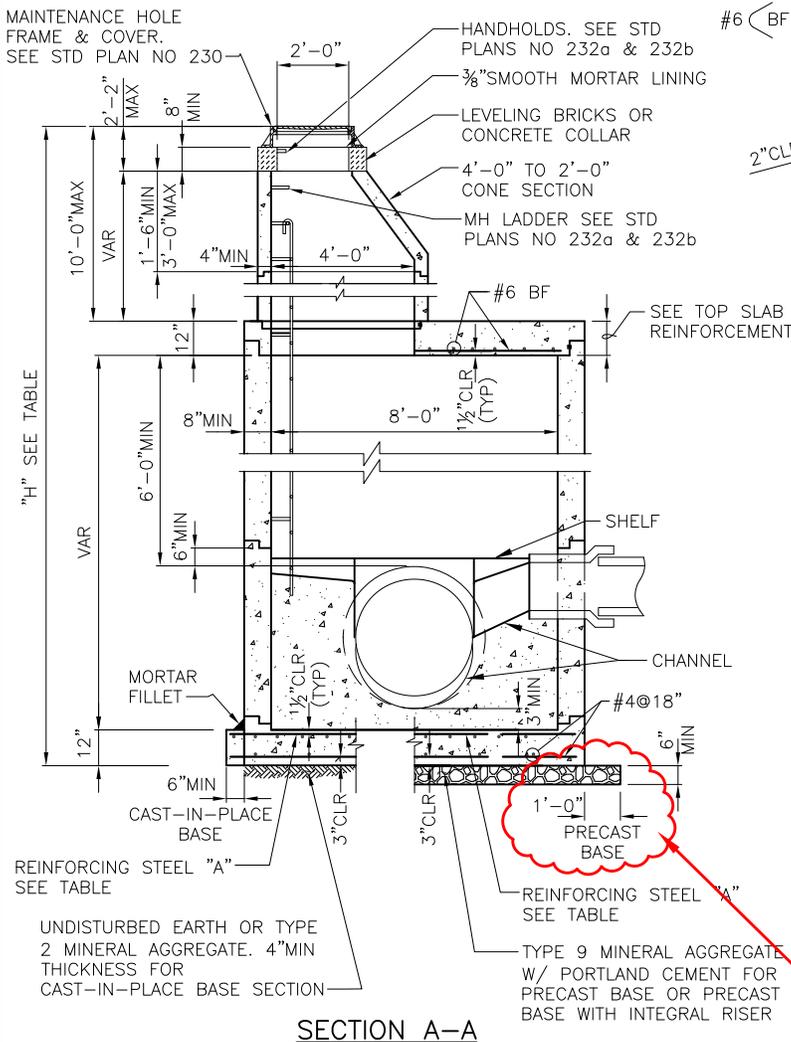
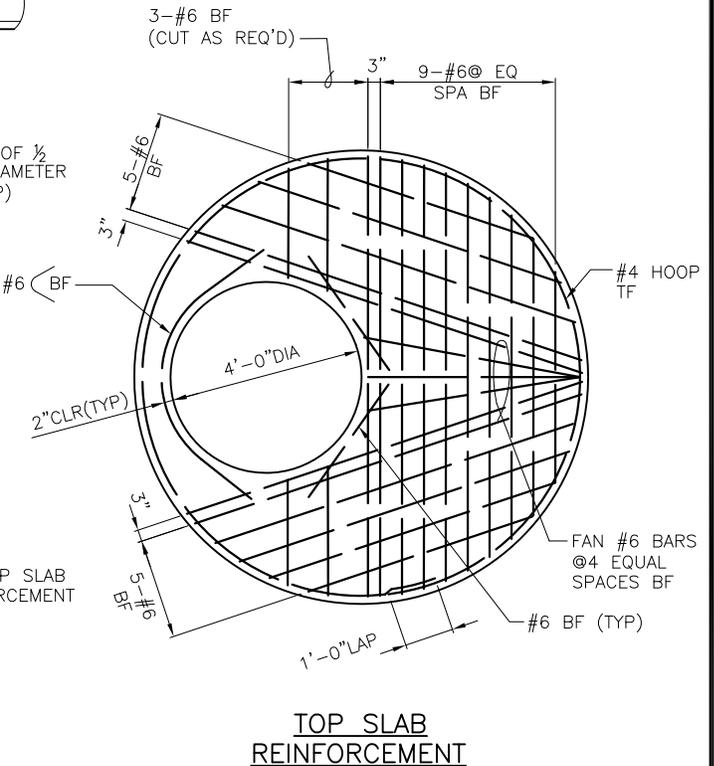
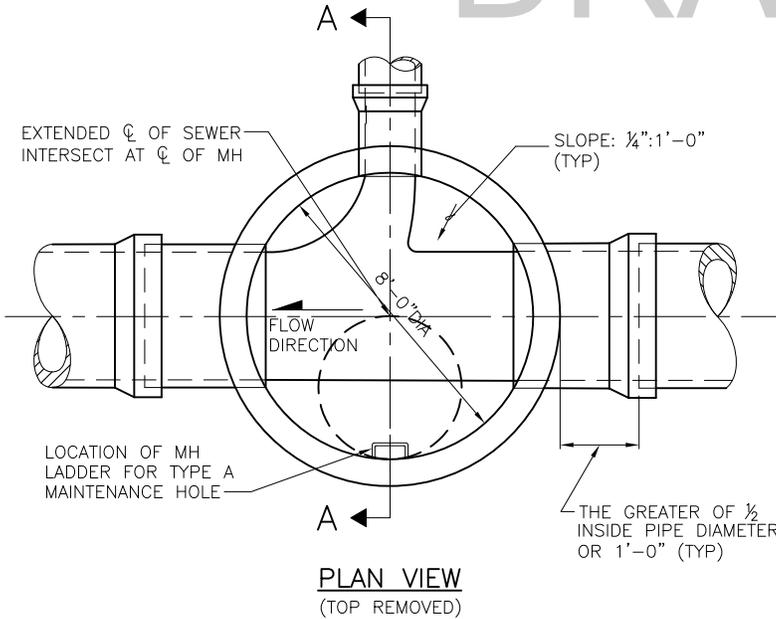
City of Seattle

NOT TO SCALE

TYPE 207a MAINTENANCE HOLE

DRAFT

"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.54	0.45
30' MAX	0.66	0.55
40' MAX	0.78	0.64



NOTES:

1. MATERIAL; CONCRETE—CLASS 4000
REINFORCING STEEL—ASTM A615 GRADE 60 N
CHANNEL AND SHELF MATERIAL; CONCRETE
CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS
MUST CONFORM TO ASTM C 478. JOINTS
BETWEEN PRECAST COMPONENTS MUST BE
RUBBER GASKETED CONFORMING TO ASTM C
443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000
LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 9".
MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3".
MIN DISTANCE BETWEEN HOLES IS 12".

base dimension corrected

REF STD SPEC SEC 7-05

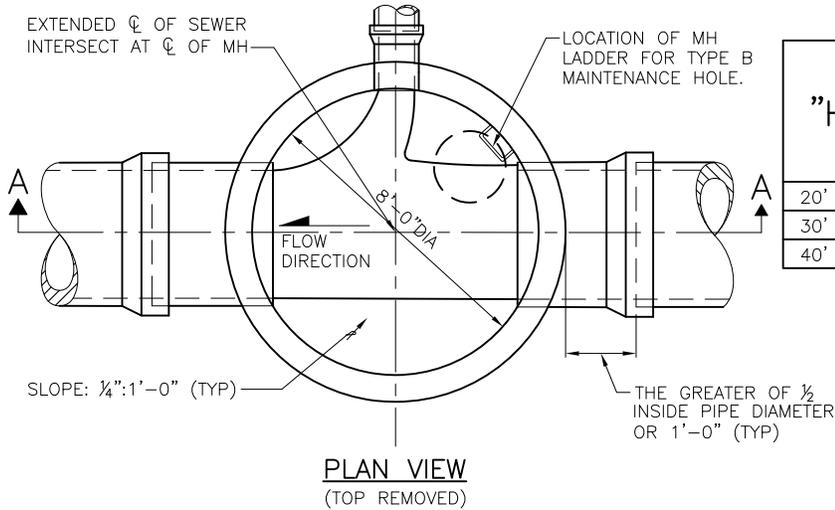


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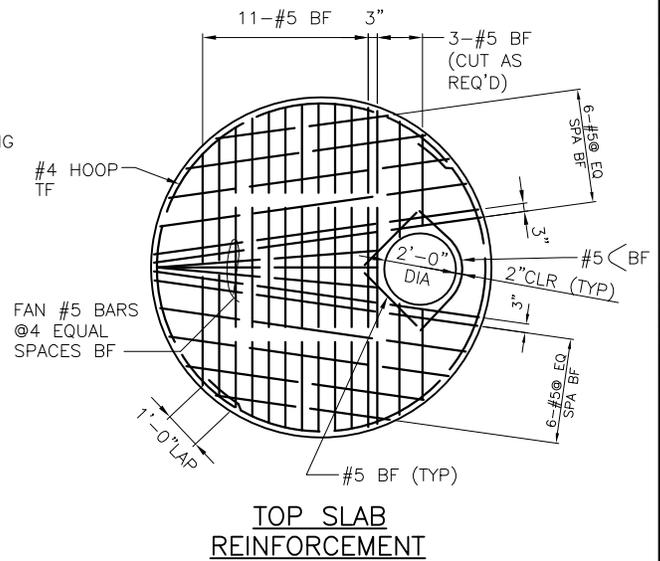
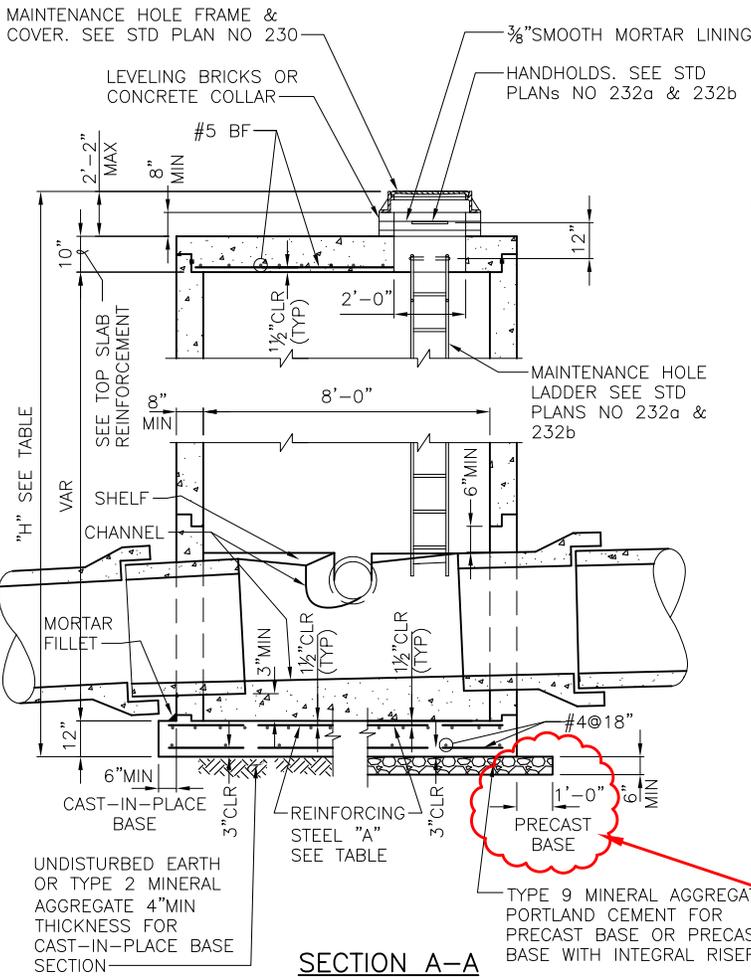
NOT TO SCALE

TYPE 208a MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.42	0.35
30' MAX	0.53	0.45
40' MAX	0.65	0.54



NOTES:

1. MATERIAL; CONCRETE-CLASS 4000 REINFORCING STEEL-ASTM A615 GRADE 60 MIN CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 9". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

base dimension corrected

REF STD SPEC SEC 7-05

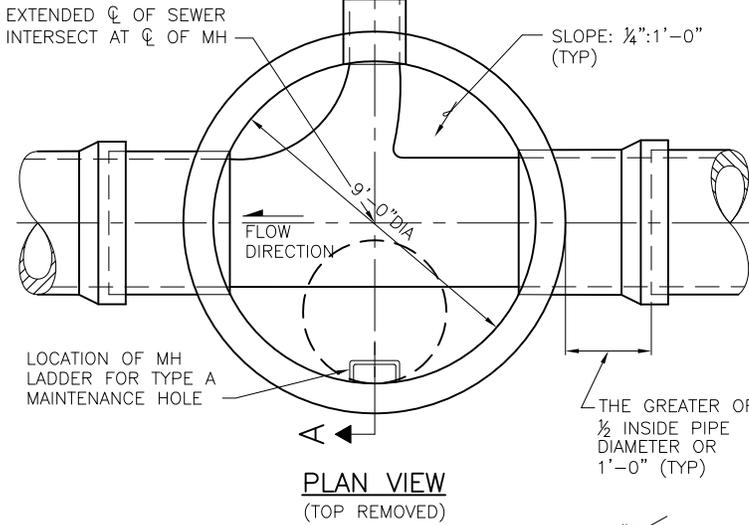


City of Seattle

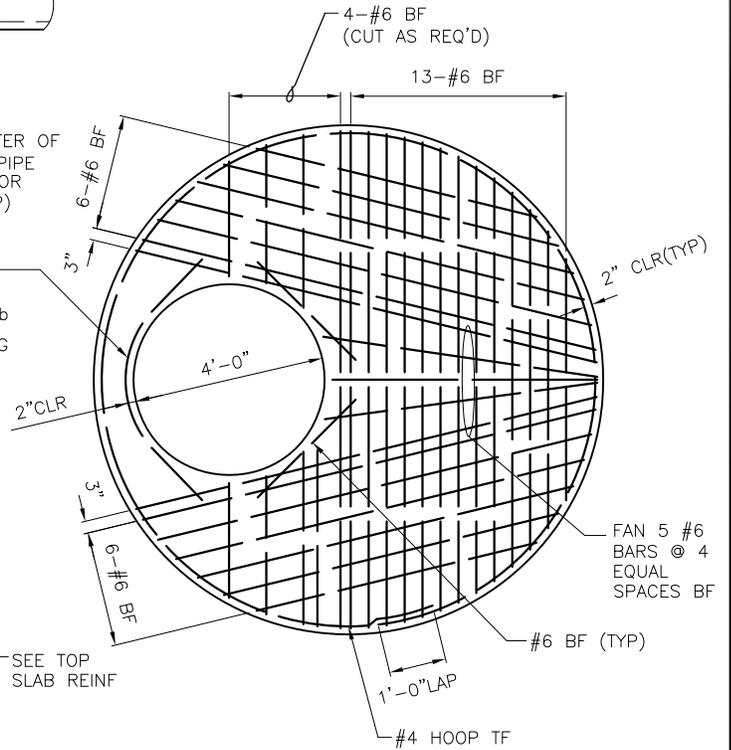
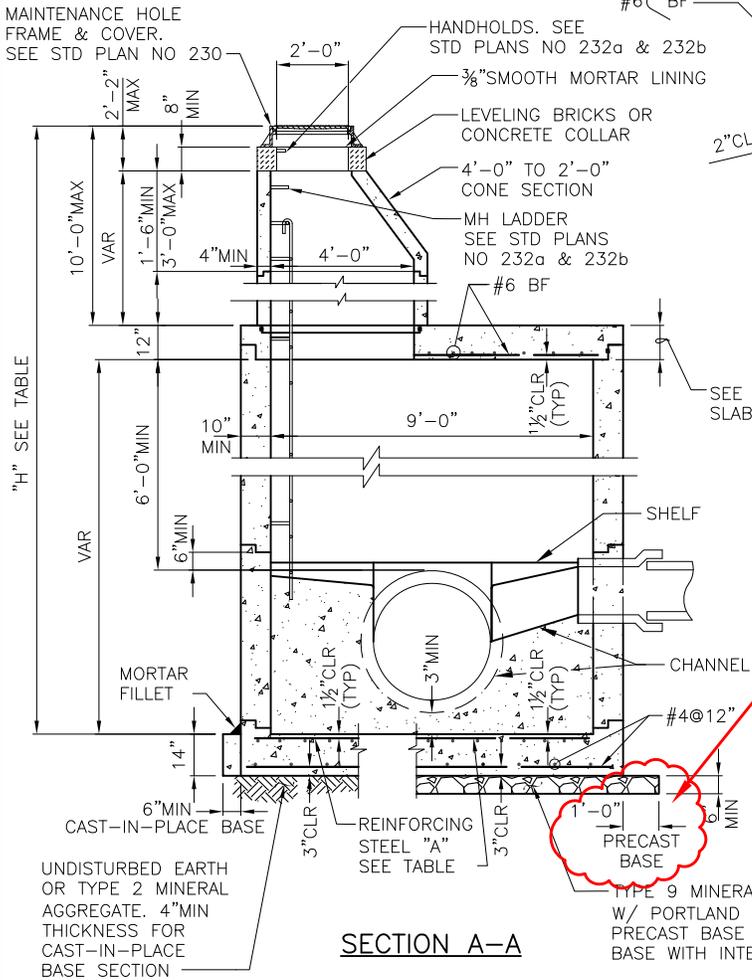
NOT TO SCALE

TYPE 208b MAINTENANCE HOLE

DRAFT



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.57	0.49
30' MAX	0.70	0.59
40' MAX	0.81	0.69



base dimension corrected

- NOTES:**
- MATERIAL; CONCRETE—CLASS 4000 REINFORCING STEEL—ASTM A615 GRADE 60 MIN CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
 - PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
 - MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
 - MAX HOLE SIZE MUST BE OD OF PIPE PLUS 10". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

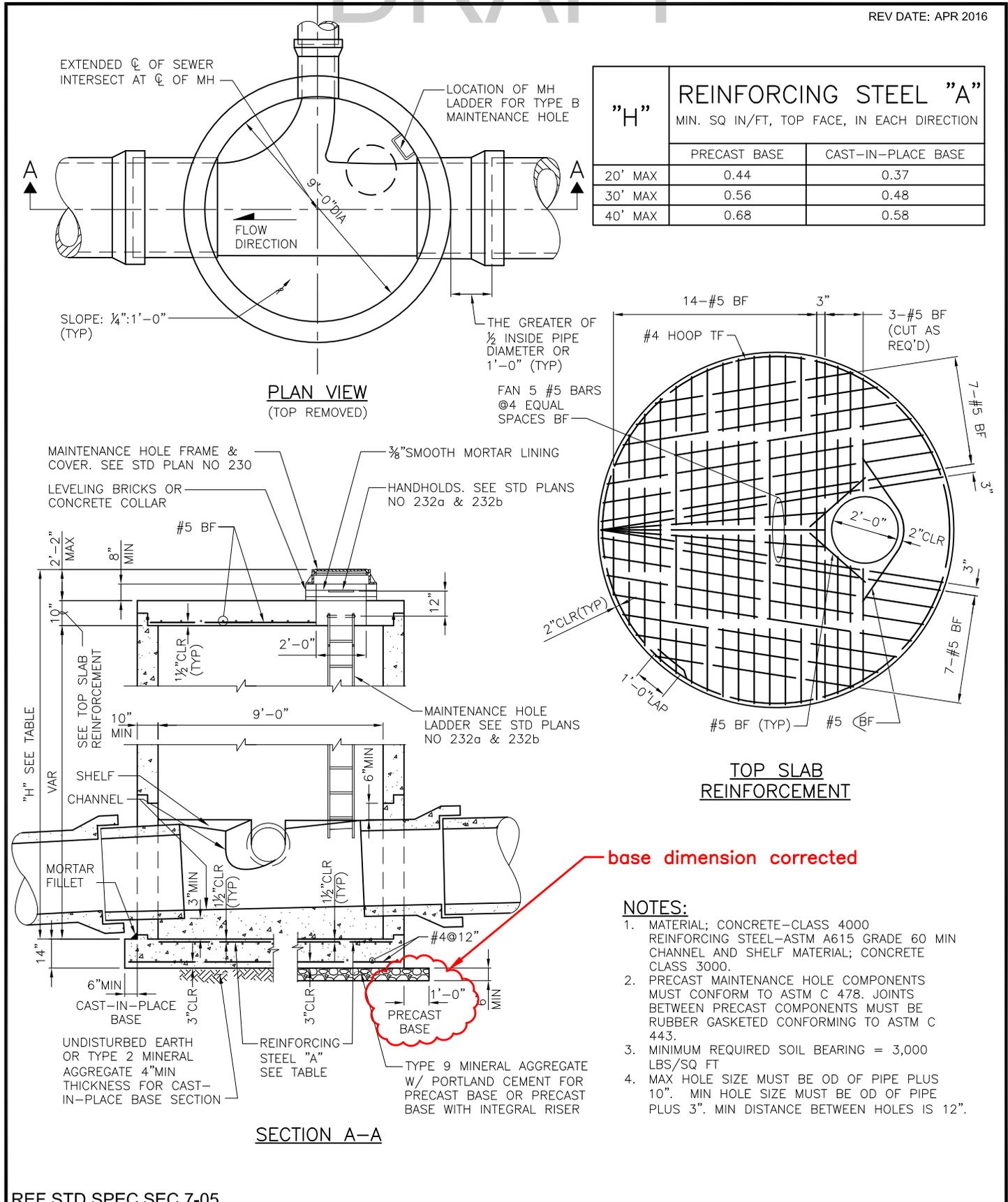
REF STD SPEC SEC 7-05



City of Seattle

NOT TO SCALE

TYPE 209a MAINTENANCE HOLE



NOTES:

1. MATERIAL; CONCRETE—CLASS 4000 REINFORCING STEEL—ASTM A615 GRADE 60 MIN CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 10". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

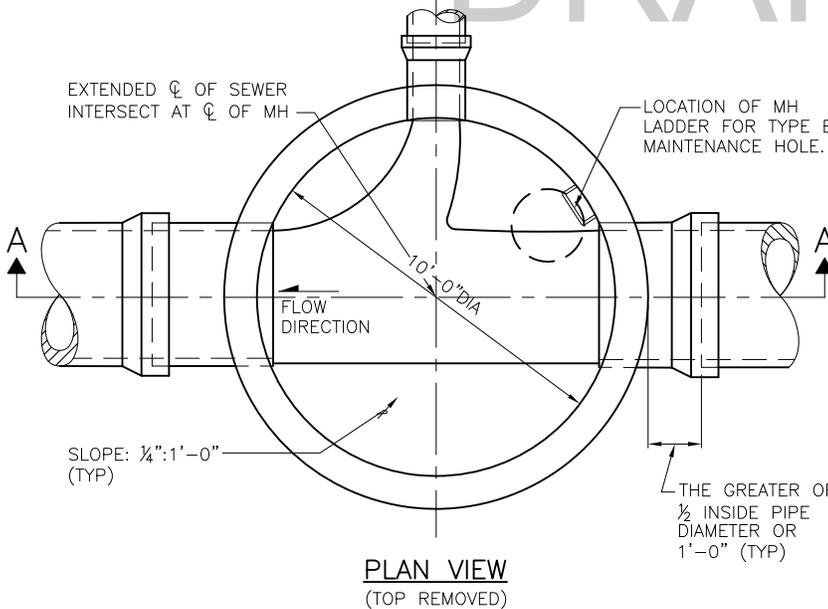
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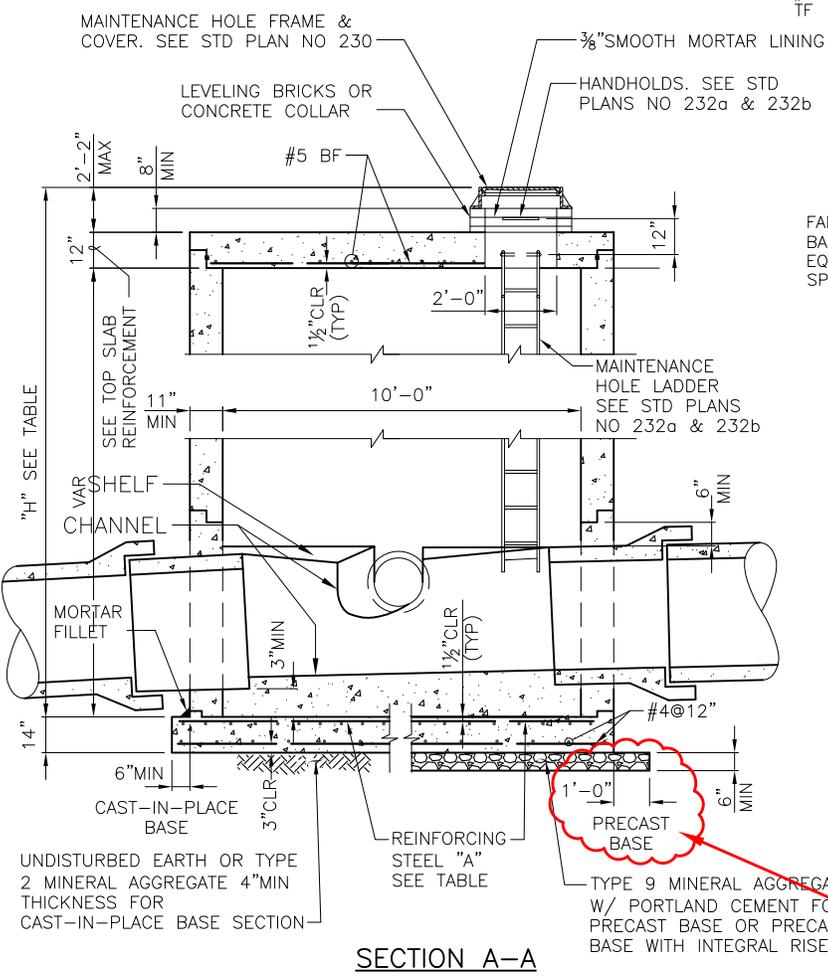
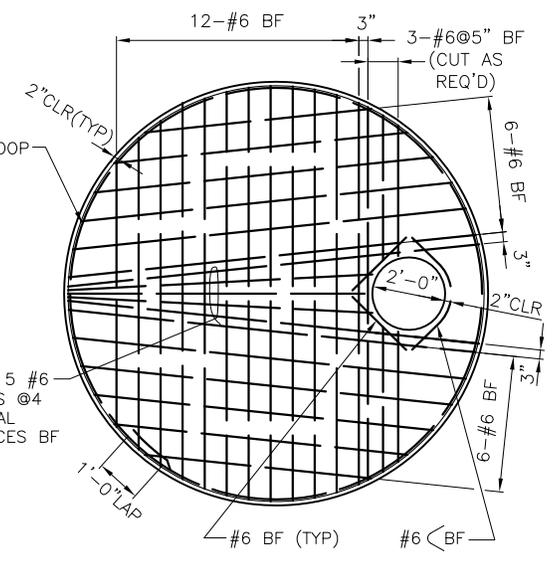
City of Seattle

NOT TO SCALE

TYPE 209b MAINTENANCE HOLE



"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.52	0.45
30' MAX	0.66	0.57
40' MAX	0.81	0.70



TOP SLAB REINFORCEMENT

- NOTES:**
- MATERIAL; CONCRETE—CLASS 4000
REINFORCING STEEL—ASTM A615 GRADE 60 MIN
CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
 - PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
 - MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
 - MAX HOLE SIZE MUST BE OD OF PIPE PLUS 11". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".
- base dimension corrected**

REF STD SPEC SEC 7-05

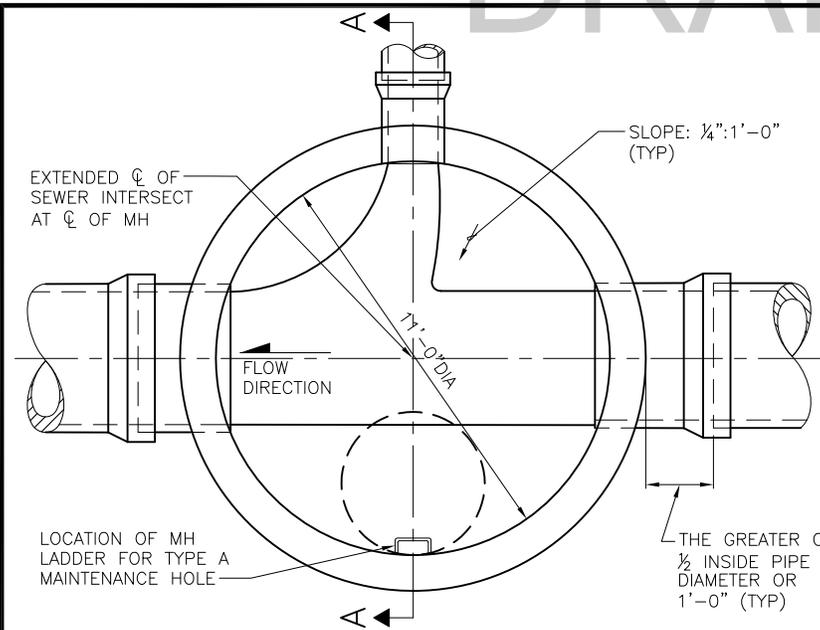


City of Seattle

NOT TO SCALE

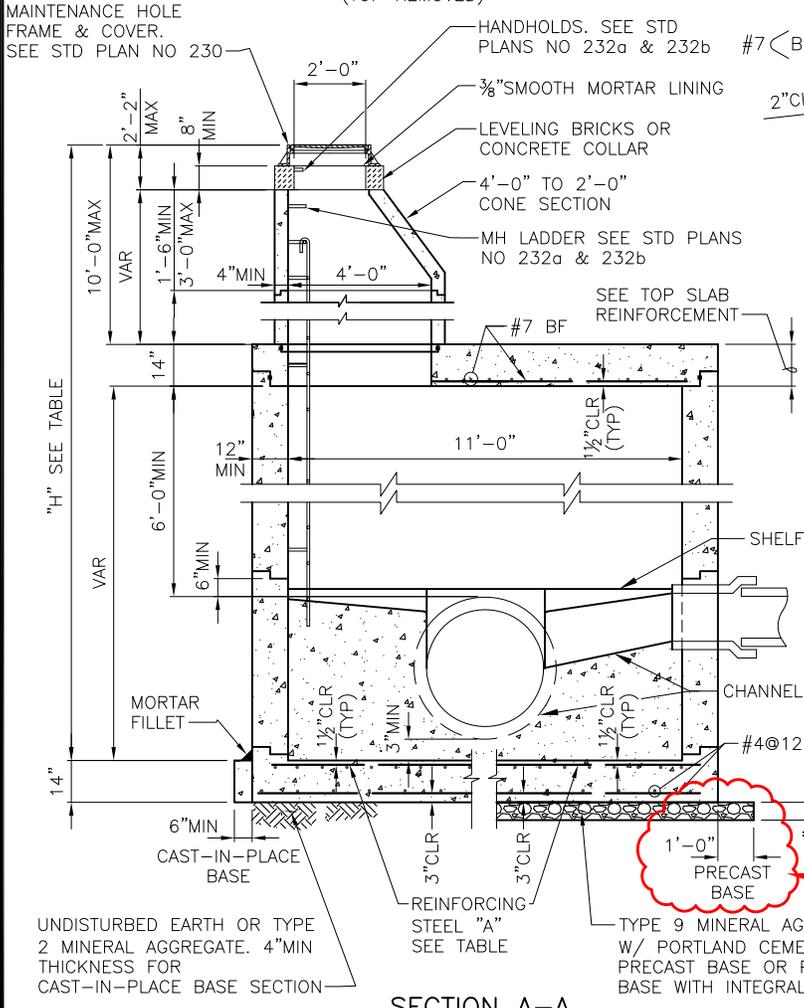
TYPE 210b MAINTENANCE HOLE

DRAFT

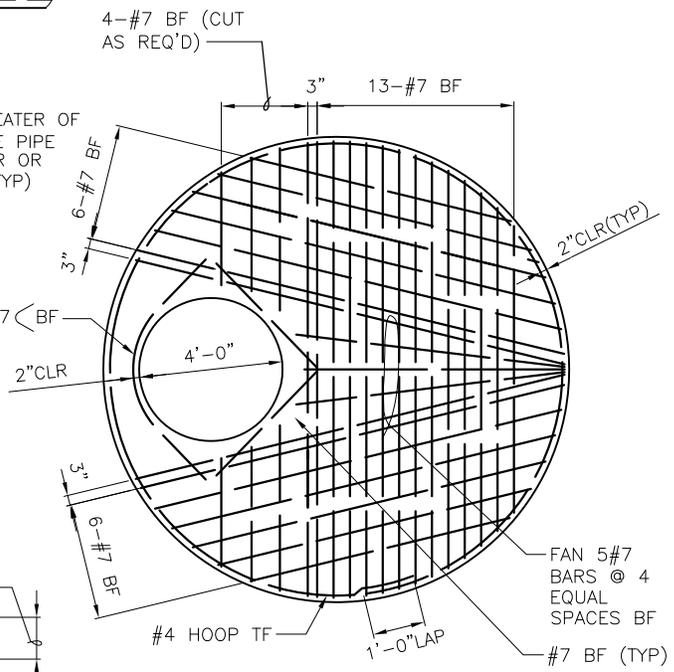


PLAN VIEW
(TOP REMOVED)

"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.85	0.74
30' MAX	1.02	0.89
40' MAX	1.20	1.05



SECTION A-A



TOP SLAB REINFORCEMENT

NOTES:

1. MATERIAL; CONCRETE-CLASS 4000 REINFORCING STEEL-ASTM A615 GRADE 60 MIN CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 12". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

base dimension corrected

REF STD SPEC SEC 7-05

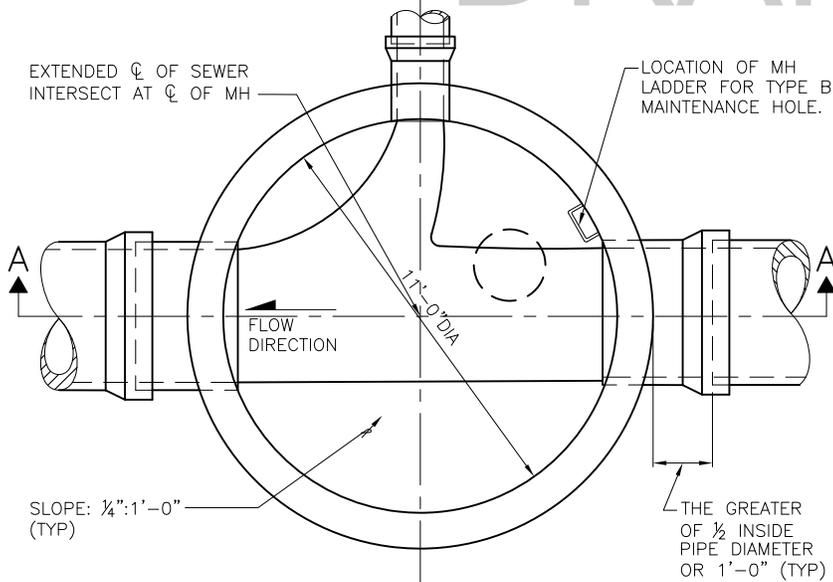


City of Seattle

NOT TO SCALE

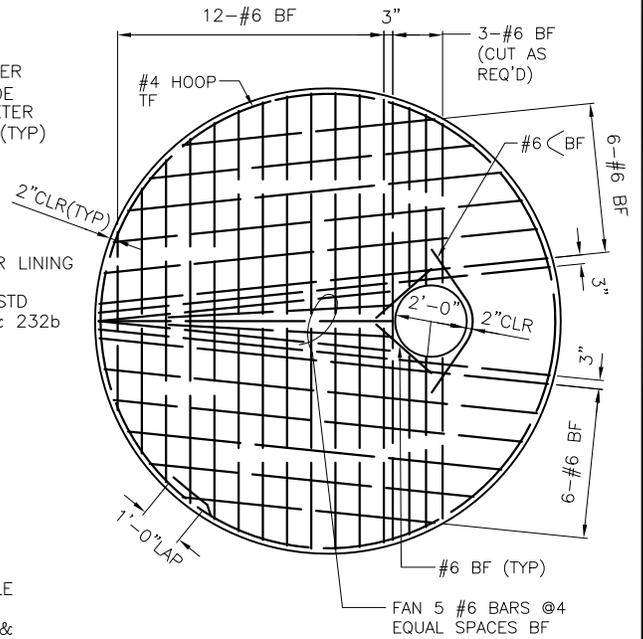
TYPE 211a MAINTENANCE HOLE

DRAFT

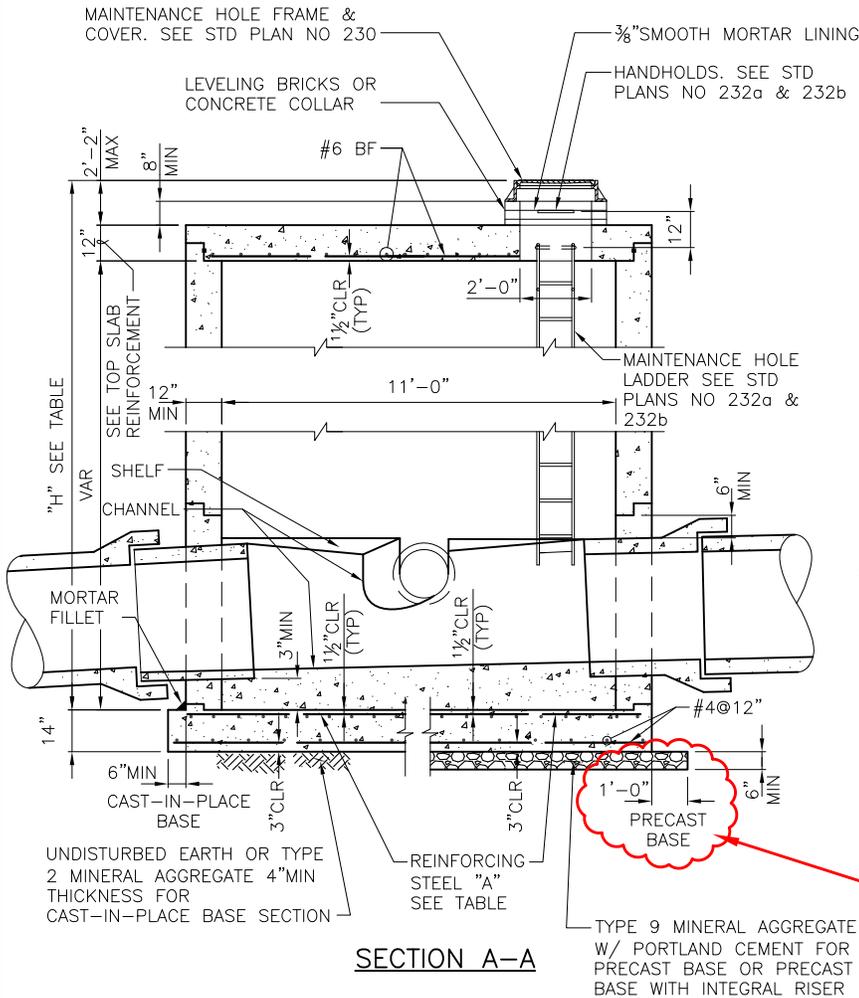


PLAN VIEW
(TOP REMOVED)

"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.62	0.54
30' MAX	0.79	0.69
40' MAX	0.97	0.85



TOP SLAB
REINFORCEMENT



SECTION A-A

NOTES:

1. MATERIAL; CONCRETE—CLASS 4000
REINFORCING STEEL—ASTM A615 GRADE 60 MIN CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 12". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

base dimension corrected

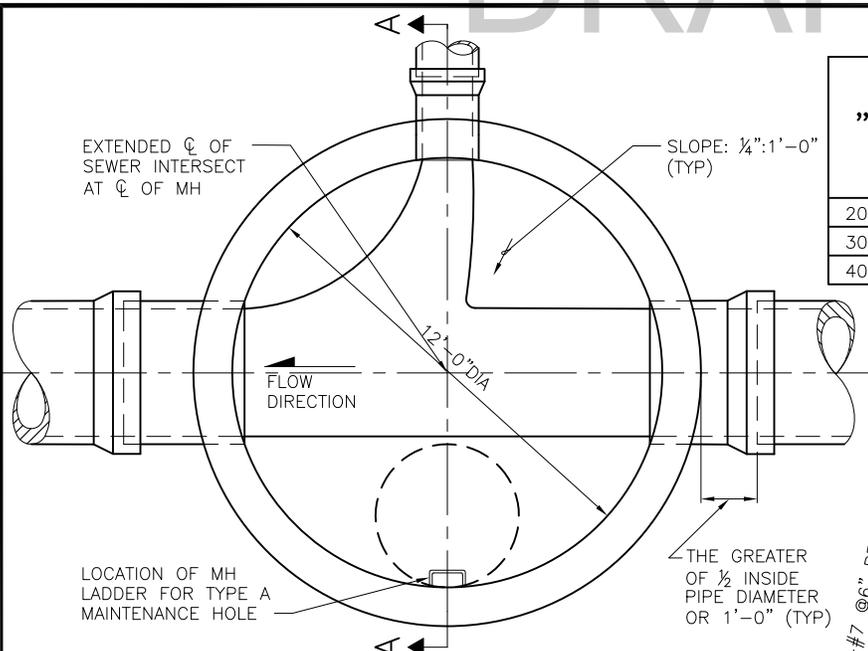
REF STD SPEC SEC 7-05



City of Seattle

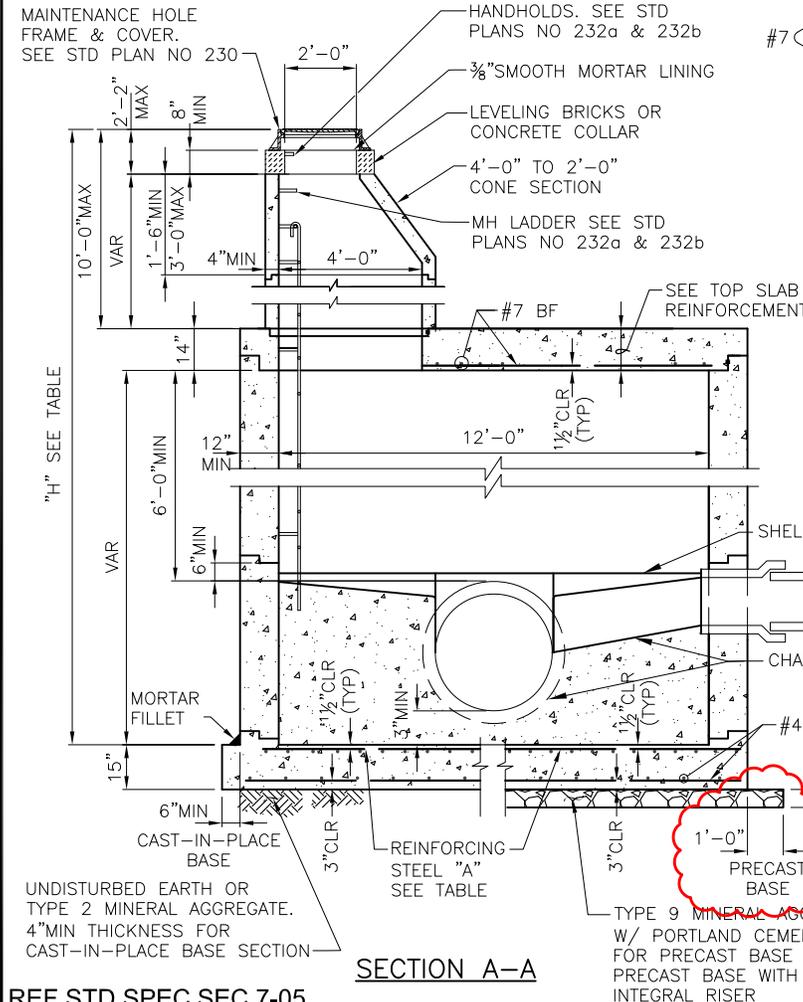
NOT TO SCALE

TYPE 211b MAINTENANCE HOLE

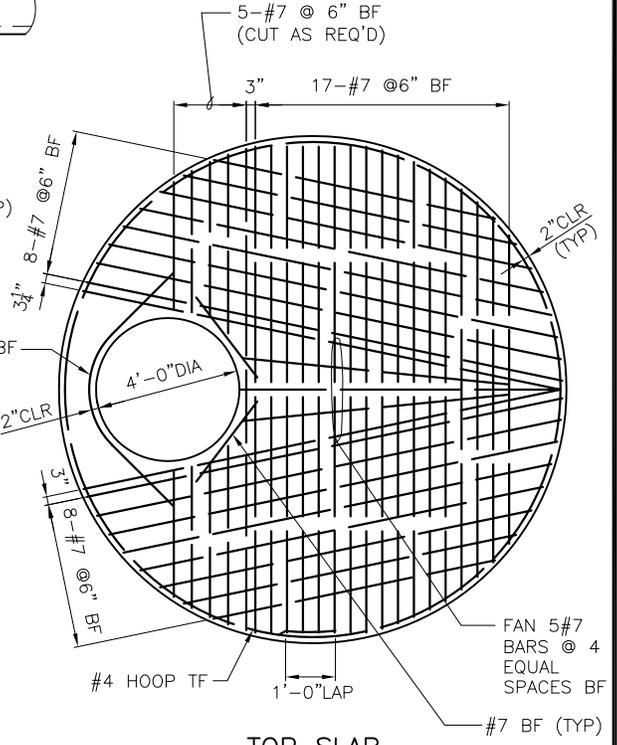


"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	1.01	0.89
30' MAX	1.28	1.13
40' MAX	1.56	1.37

PLAN VIEW
(TOP REMOVED)



SECTION A-A



TOP SLAB REINFORCEMENT

NOTES:

1. MATERIAL; CONCRETE—CLASS 4000
REINFORCING STEEL—ASTM A615 GRADE 60 MIN CHANNEL AND SHELF MATERIAL; CONCRETE CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS MUST CONFORM TO ASTM C 478. JOINTS BETWEEN PRECAST COMPONENTS MUST BE RUBBER GASKETED CONFORMING TO ASTM C 443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000 LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS 13". MIN HOLE SIZE MUST BE OD OF PIPE PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

base dimension corrected

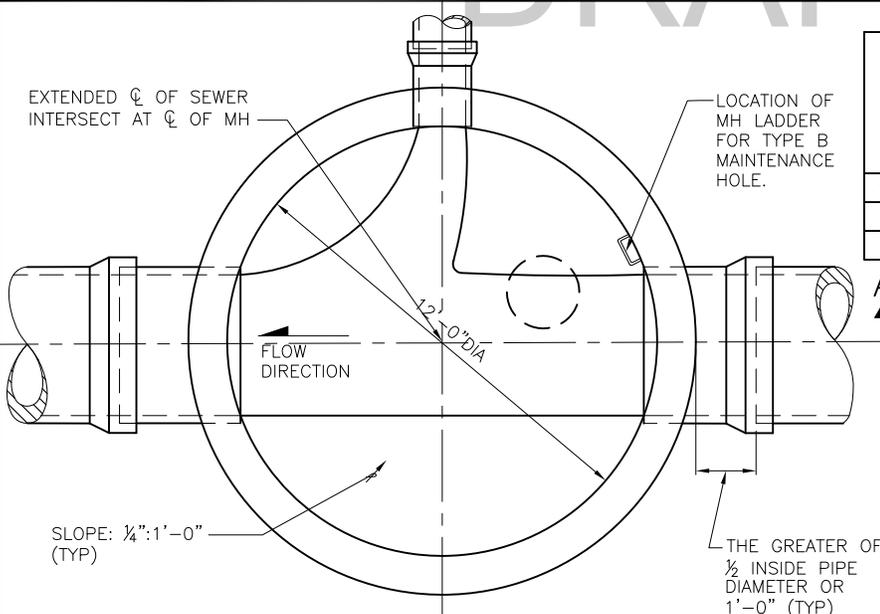
REF STD SPEC SEC 7-05



City of Seattle

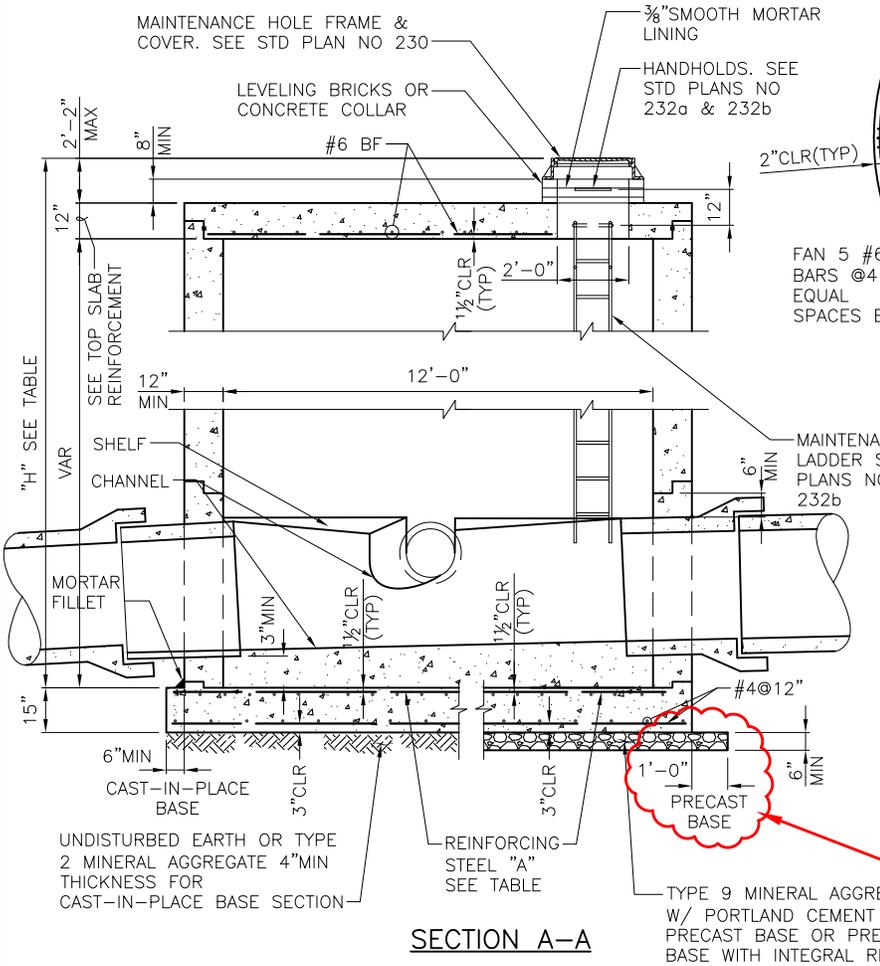
NOT TO SCALE

TYPE 212a MAINTENANCE HOLE

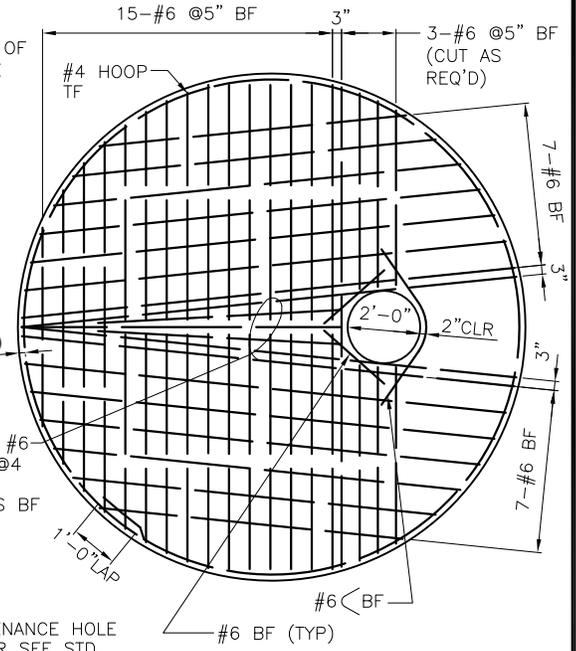


"H"	REINFORCING STEEL "A"	
	MIN. SQ IN/FT, TOP FACE, IN EACH DIRECTION	
	PRECAST BASE	CAST-IN-PLACE BASE
20' MAX	0.81	0.72
30' MAX	1.09	0.96
40' MAX	1.36	1.20

PLAN VIEW
(TOP REMOVED)



SECTION A-A



TOP SLAB
REINFORCEMENT

NOTES:

1. MATERIAL; CONCRETE—CLASS 4000
REINFORCING STEEL—ASTM A615 GRADE 60 MIN
CHANNEL AND SHELF MATERIAL; CONCRETE
CLASS 3000.
2. PRECAST MAINTENANCE HOLE COMPONENTS
MUST CONFORM TO ASTM C 478. JOINTS
BETWEEN PRECAST COMPONENTS MUST BE
RUBBER GASKETED CONFORMING TO ASTM C
443.
3. MINIMUM REQUIRED SOIL BEARING = 3,000
LBS/SQ FT
4. MAX HOLE SIZE MUST BE OD OF PIPE PLUS
13". MIN HOLE SIZE MUST BE OD OF PIPE
PLUS 3". MIN DISTANCE BETWEEN HOLES IS 12".

base dimension corrected

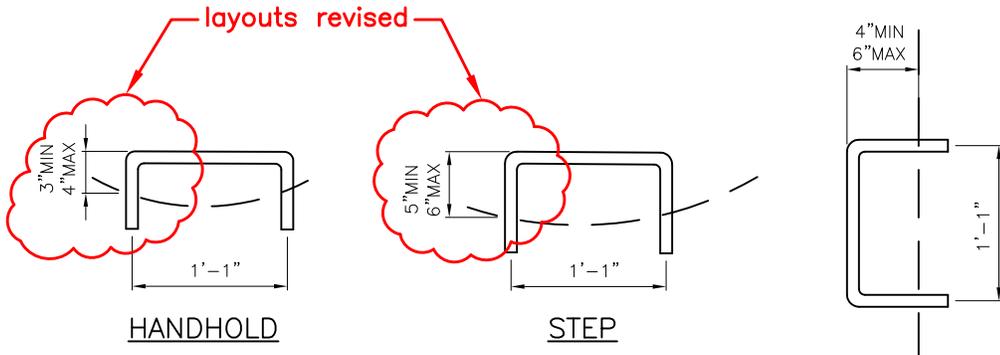
REF STD SPEC SEC 7-05



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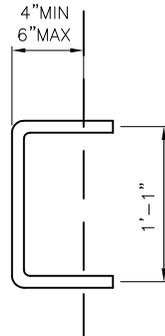
NOT TO SCALE

TYPE 212b MAINTENANCE HOLE

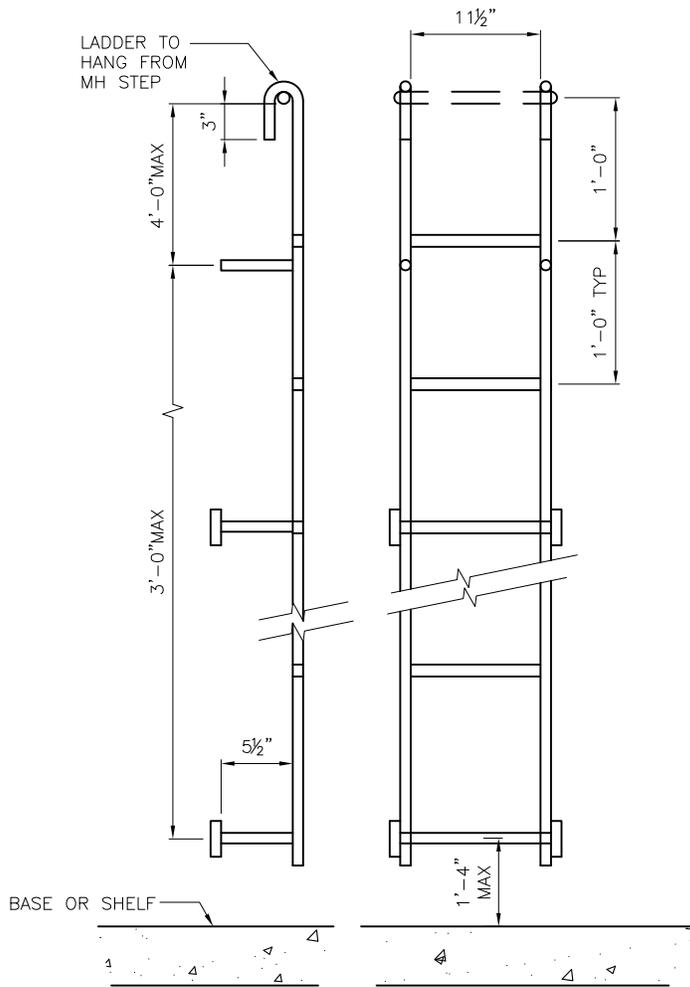


HANDHOLD

STEP



VERTICAL HANDHOLD



LADDER

NOTES:

1. MATERIAL – STEEL REINFORCED POLYPROPYLENE
2. DIMENSIONS FOR THE MH LADDER AND STEP ARE MINIMUM REQUIREMENTS ONLY.
3. WHEN THE DISTANCE FROM THE LAST (HIGHEST) STEP OR HANDHOLD TO THE TOP OF THE MH FRAME EXCEEDS 1'-6", A HANDHOLD MUST BE INSTALLED MID-WAY IN THE LEVELING BRICK OR COLLAR.
4. EITHER STEPS, LADDERS OR A COMBINATION OF THE TWO CAN BE USED. IF BOTH STEPS AND LADDERS ARE USED IN ANY MH, THEY MUST BE FROM THE SAME MANUFACTURER.
5. A VERTICAL HANDHOLD MUST BE INSTALLED 4'-0" ABOVE THE SHELF WHEN INDICATED IN MH PLAN VIEW.

REF STD SPEC SEC 7-05



City of Seattle

NOT TO SCALE

MAINTENANCE HOLE LADDER,
STEP AND HANDHOLD

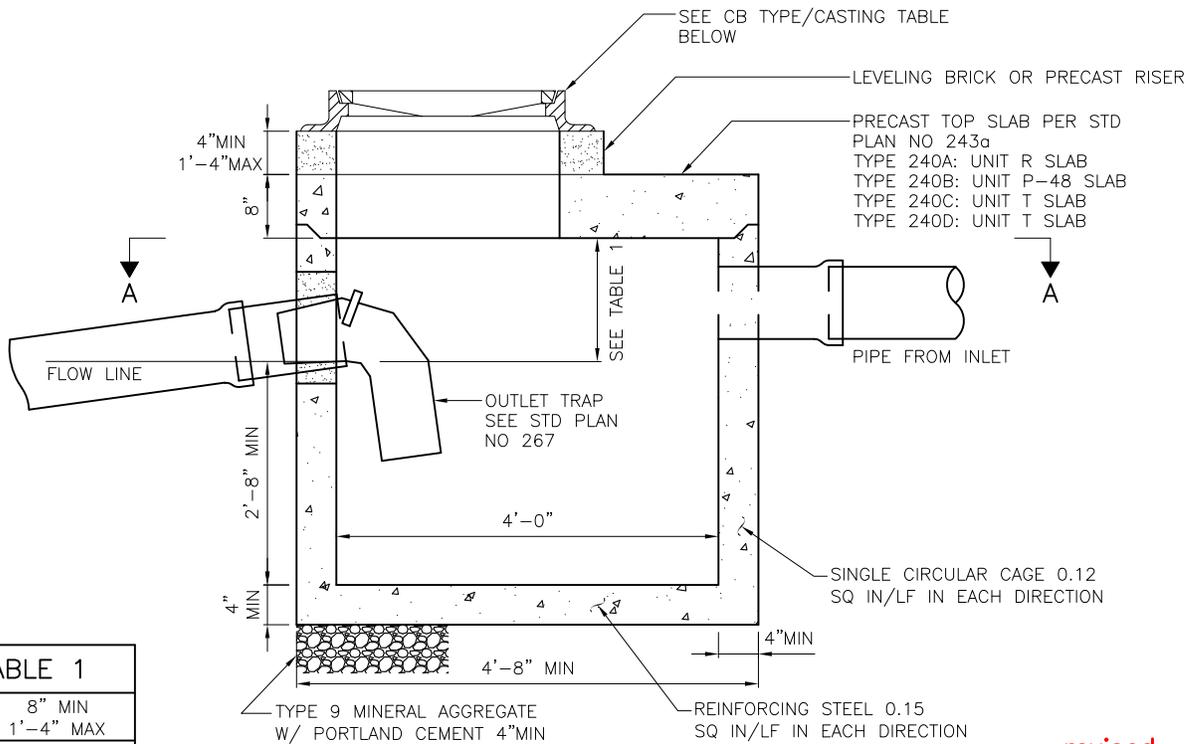
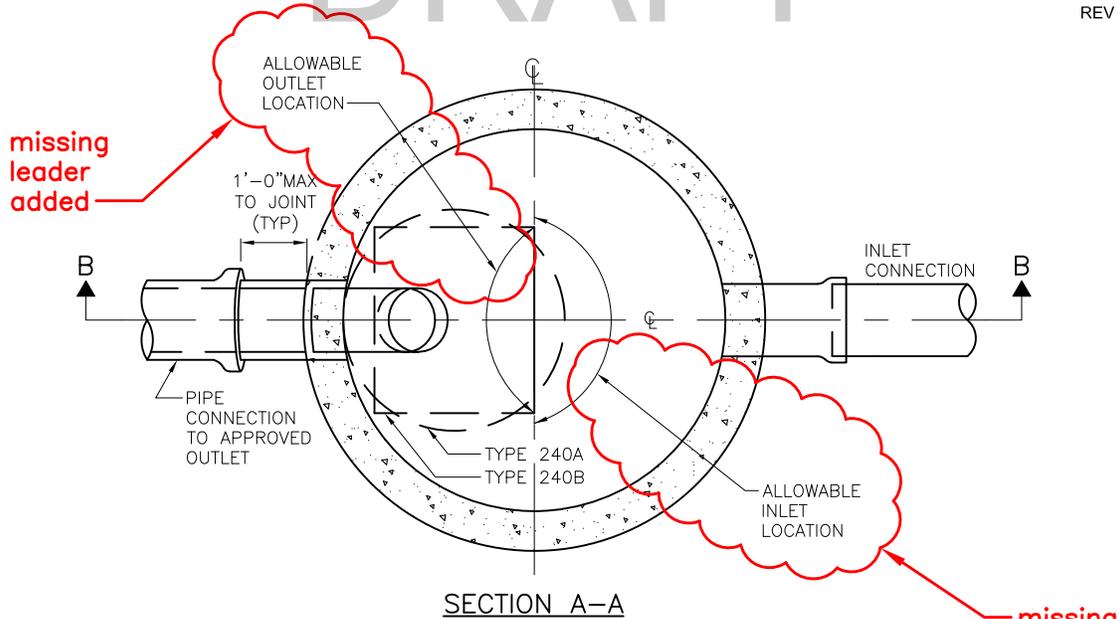


TABLE 1

6"ø	8" MIN 1'-4" MAX
8"ø	10" MIN 1'-4" MAX
12"ø	1'-3" MIN 2'-0" MAX

- NOTES:**
1. FRAME & GRATE OR FRAME & COVER MUST BE LOCATED OVER TRAP.
 2. INVERT OF INLET PIPE MUST BE 2" MIN ABOVE INVERT OF OUTLET PIPE.
 3. SEE STD PLAN 261 FOR ALLOWABLE OUTLET LOCATIONS.

CB TYPE	CASTING	
	FRAME	COVER
240A	PER STD PLAN 230	PER STD PLAN 230
240B	PER STD PLAN 264	PER STD PLAN 264
240C	PER STD PLAN 262	PER STD PLAN 265
240D	PER STD PLAN 263A	PER STD PLAN 265

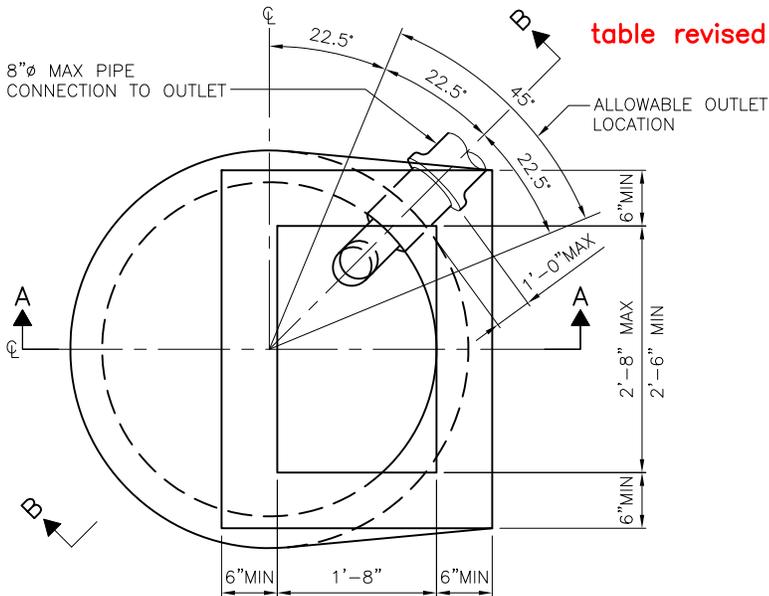
REF STD SPEC SEC 7-05



City of Seattle

NOT TO SCALE

TYPE 240 CATCH BASIN

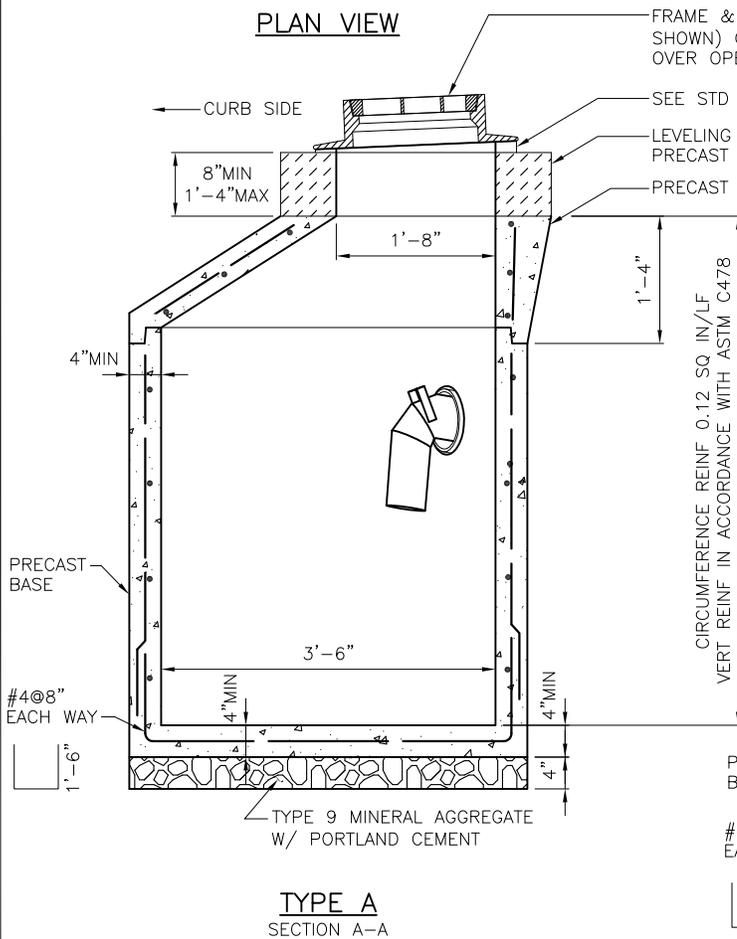


CB TYPE	CASTING		
	FRAME	GRATE	HOOD
A	NO 262	NO 265	NONE
B	NO 263A	NO 265	NO 263A
C	NO 263A	NO 265	NO 263B

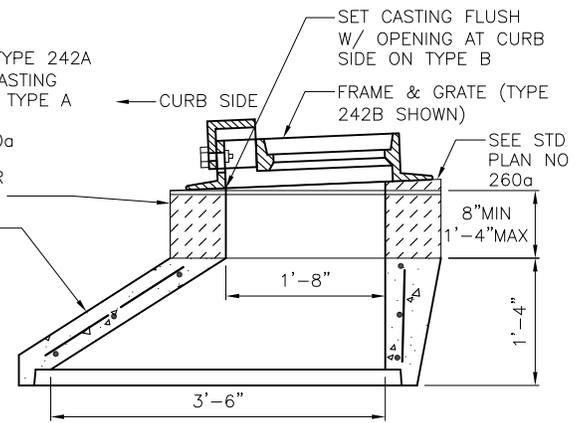
NOTES:

1. MATERIAL: CONCRETE: CLASS 4000
REINFORCING STEEL: ASTM A 615 GR 60
2. INSTALL & LOCATE PER STD PLANS NO 260 & 261
3. OUTLET TRAP TO BE LOCATED DIRECTLY BELOW FRAME AND GRATE
4. USE OF LEVELING BRICKS MUST BE RUNNING BOND PATTERN WITH 1/4 TO 1/2 GROUT IN BETWEEN BRICKS.

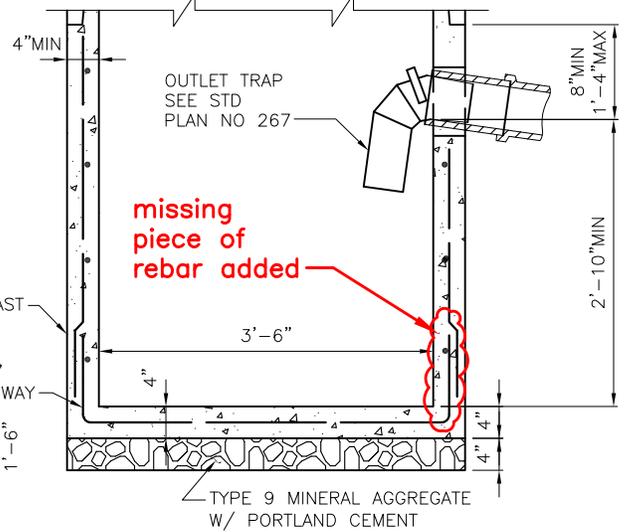
PLAN VIEW



TYPE A
SECTION A-A



TYPE B
SECTION A-A



TYPE A & B
SECTION B-B

REF STD SPEC SEC 7-05

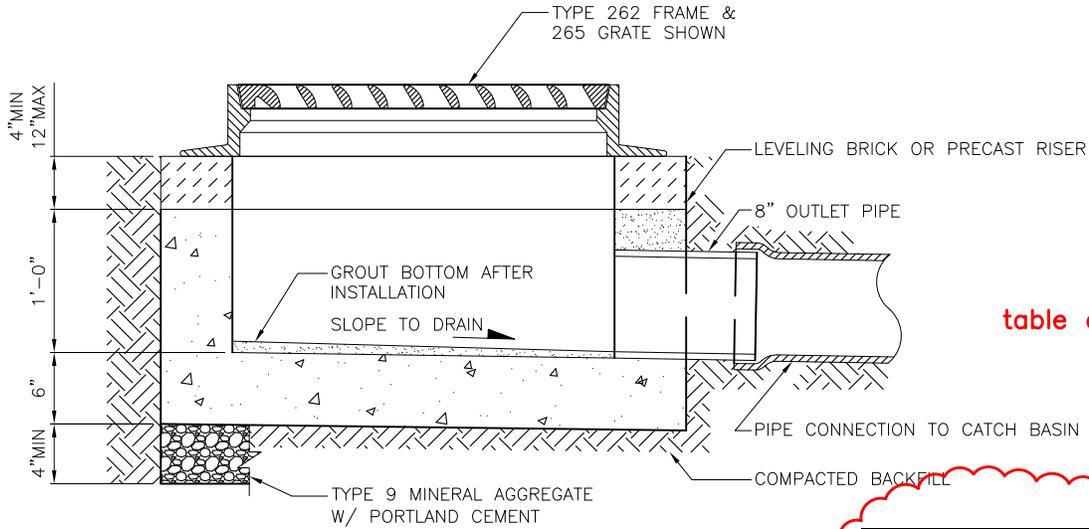


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NOT TO SCALE

TYPE 242 CATCH BASIN

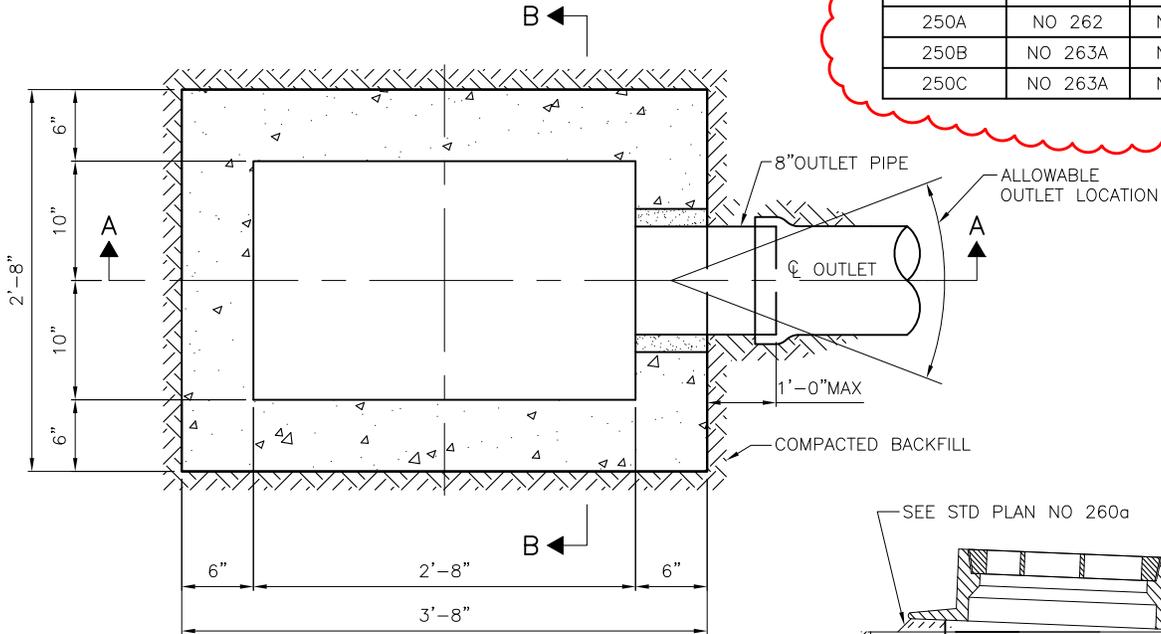
DRAFT



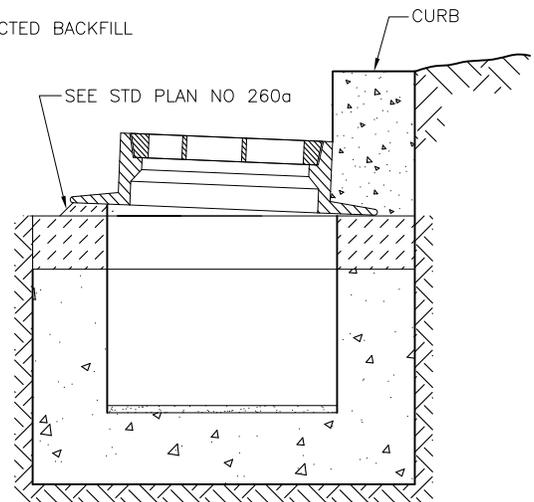
SECTION A-A

table added

INLET TYPE	CASTING		
	FRAME	GRATE	HOOD
250A	NO 262	NO 265	NONE
250B	NO 263A	NO 265	NO 263A
250C	NO 263A	NO 265	NO 263B



PLAN VIEW



SECTION B-B
TYPE A ONLY

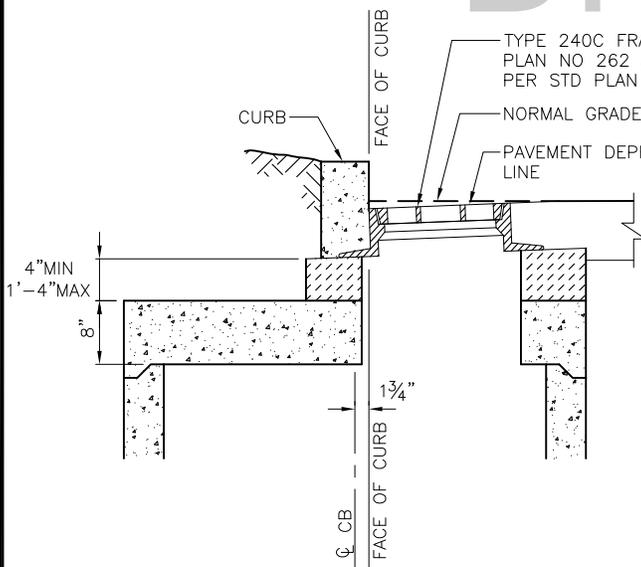
REF STD SPEC SEC 7-05



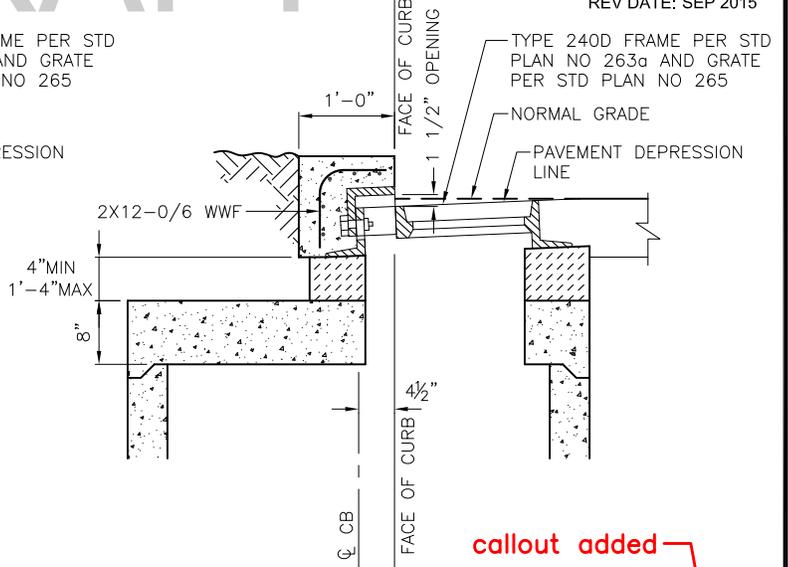
City of Seattle

NOT TO SCALE

TYPE 250 INLET

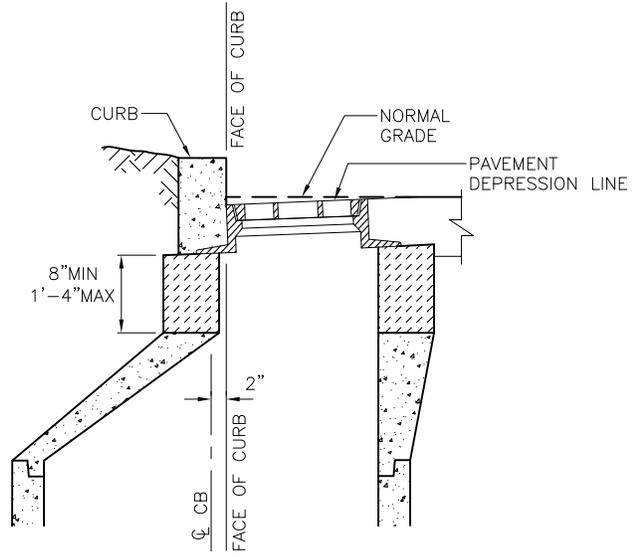


TYPE 240C CB

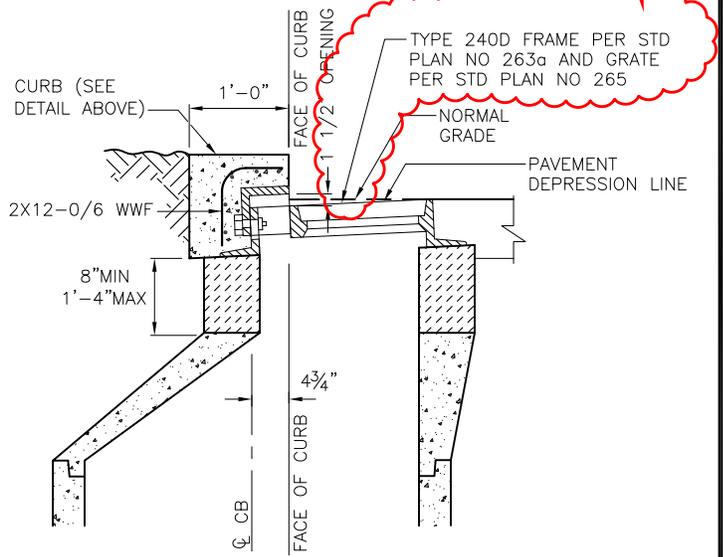


TYPE 240D CB

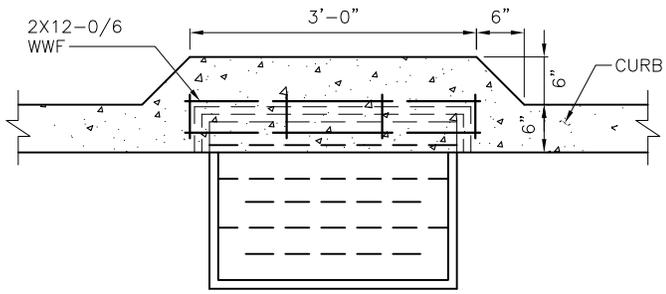
callout added



TYPE 242A CB
(TYPE 250A INLET SIMILAR)



TYPE 242B CB
(TYPE 250B INLET SIMILAR)



CURB DETAIL (PLAN VIEW) FOR
TYPE 240D & 242B CB & TYPE 250B INLET

new detail was added then removed and moved to new Std Plan 260c

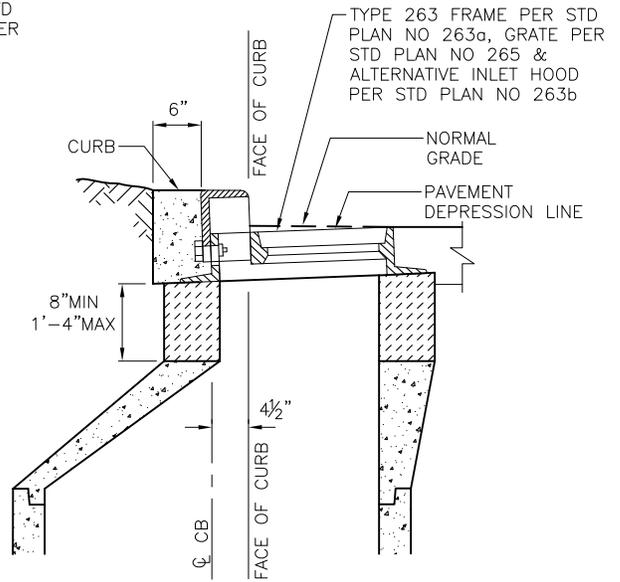
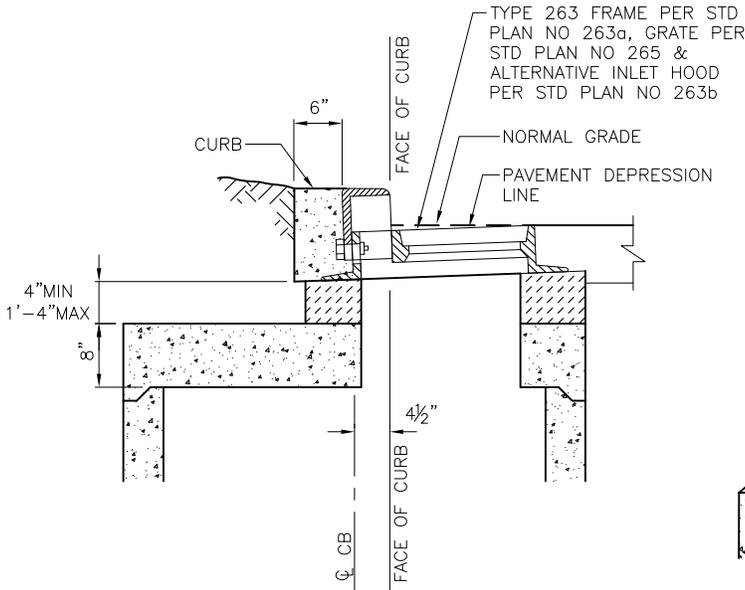
REF STD SPEC SEC 7-05



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NOT TO SCALE

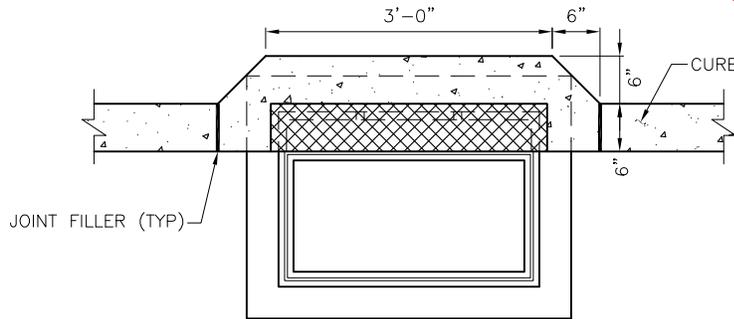
CATCH BASIN &
INLET INSTALLATION



TYPE 240C CB

TYPE 242A CB

new std plan



CURB DETAIL (PLAN VIEW) FOR TYPE 240D & 242C CB & TYPE 250B INLET

REF STD SPEC SEC 7-05

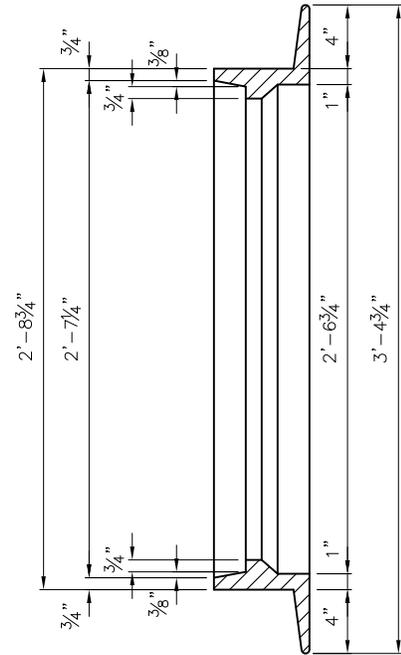
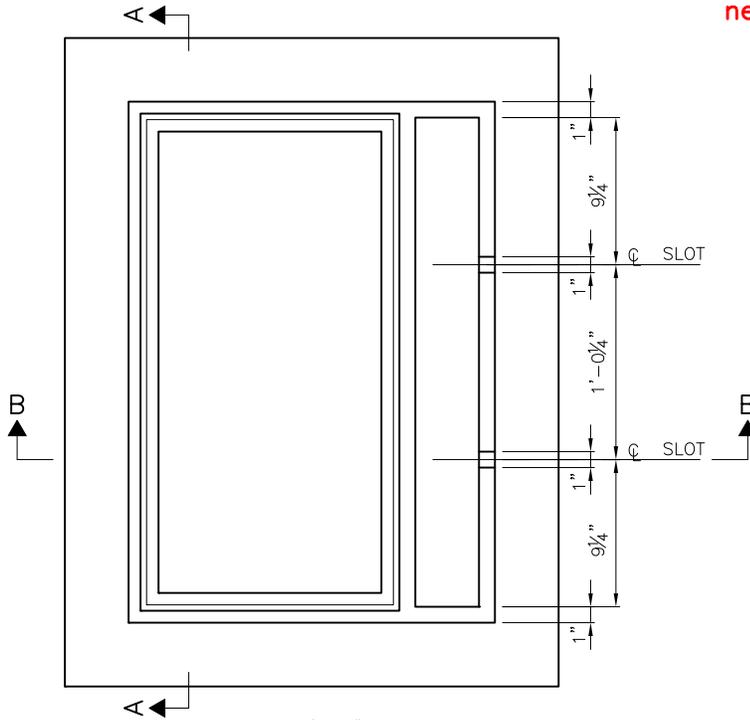


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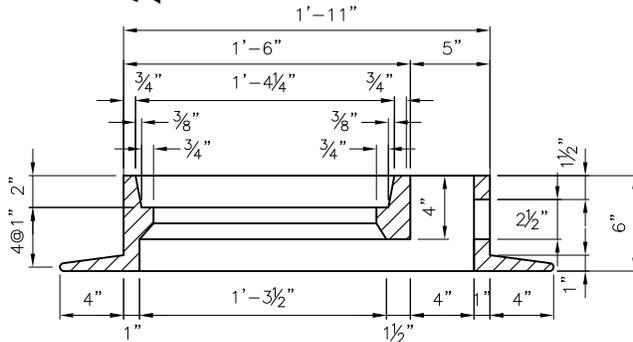
NOT TO SCALE

CATCH BASIN & INLET
INSTALLATION WITH STANDARD
PLAN 263B ALTERNATIVE HOOD

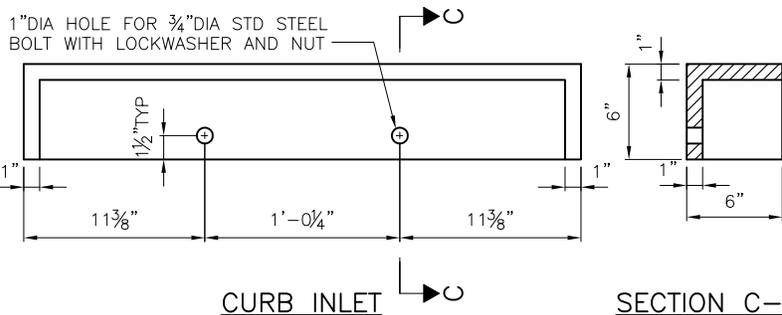
renumbered due to new std plan 263b



SECTION A-A



SECTION B-B



CURB INLET

SECTION C-C

REF STD SPEC SEC 9-12



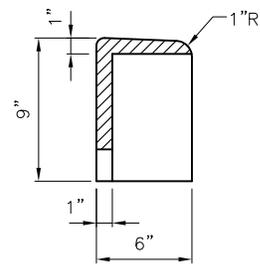
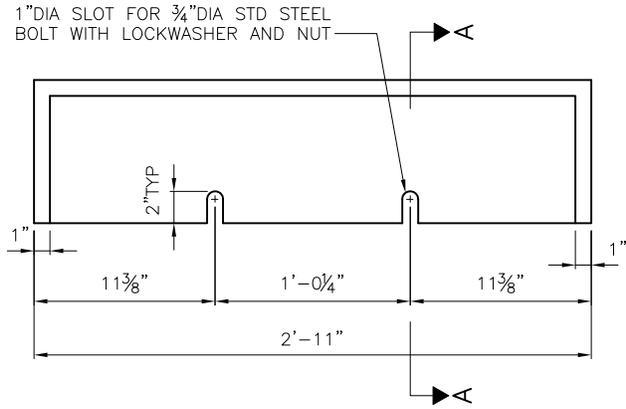
City of Seattle

NOT TO SCALE

TYPE 263 INLET FRAME AND HOOD

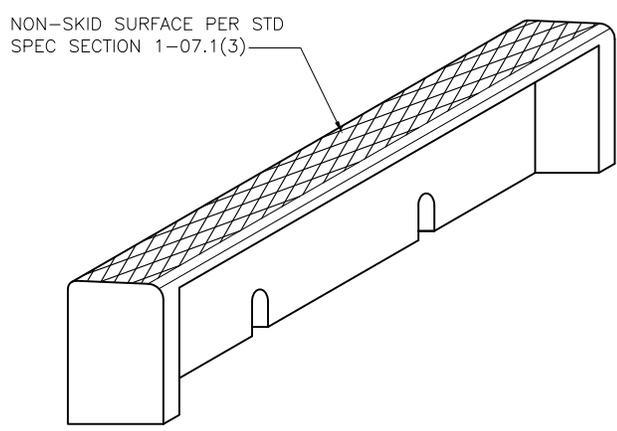
DRAFT

new standard plan



SECTION A-A

CURB INLET



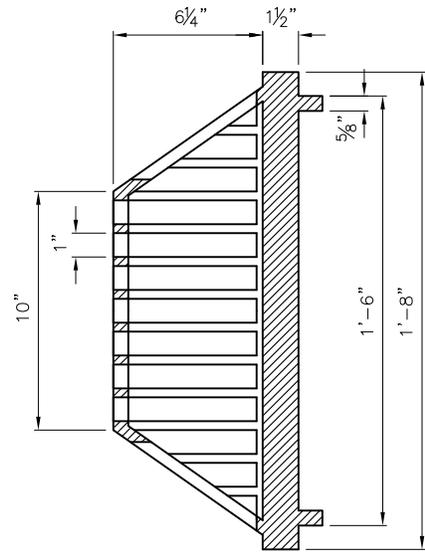
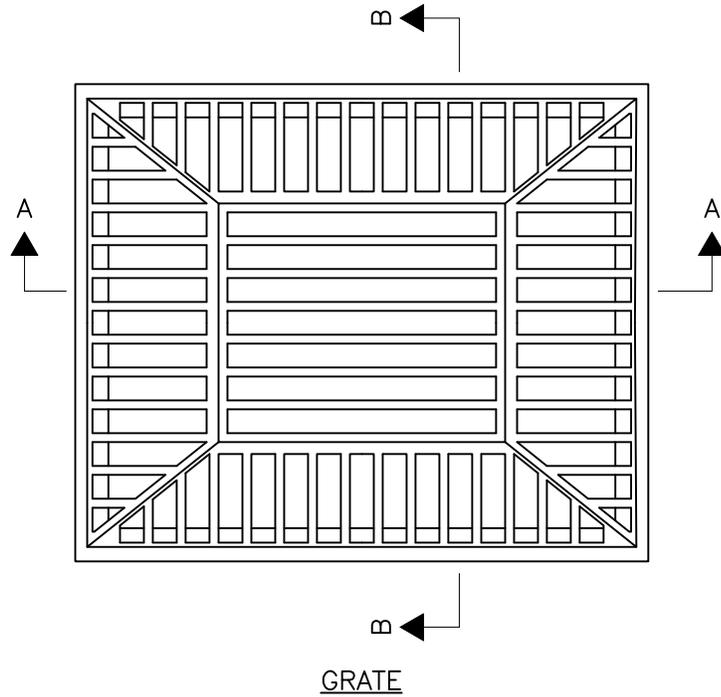
REF STD SPEC SEC 9-12



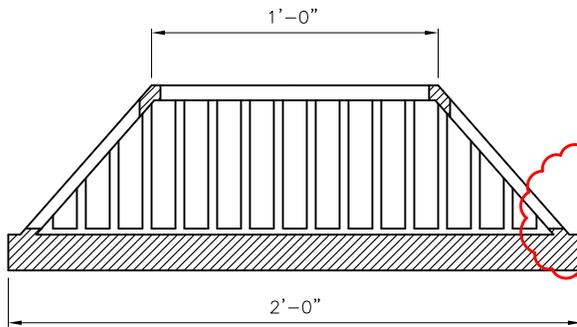
City of Seattle

NOT TO SCALE

TYPE 263 ALTERNATIVE INLET HOOD



SECTION B-B



SECTION A-A

callout added

NOTES:

- 1. GRATE MATERIAL: DUCTILE IRON
- 2. FRAME PER STD PLAN NO 264

REF STD SPEC SEC 9-12

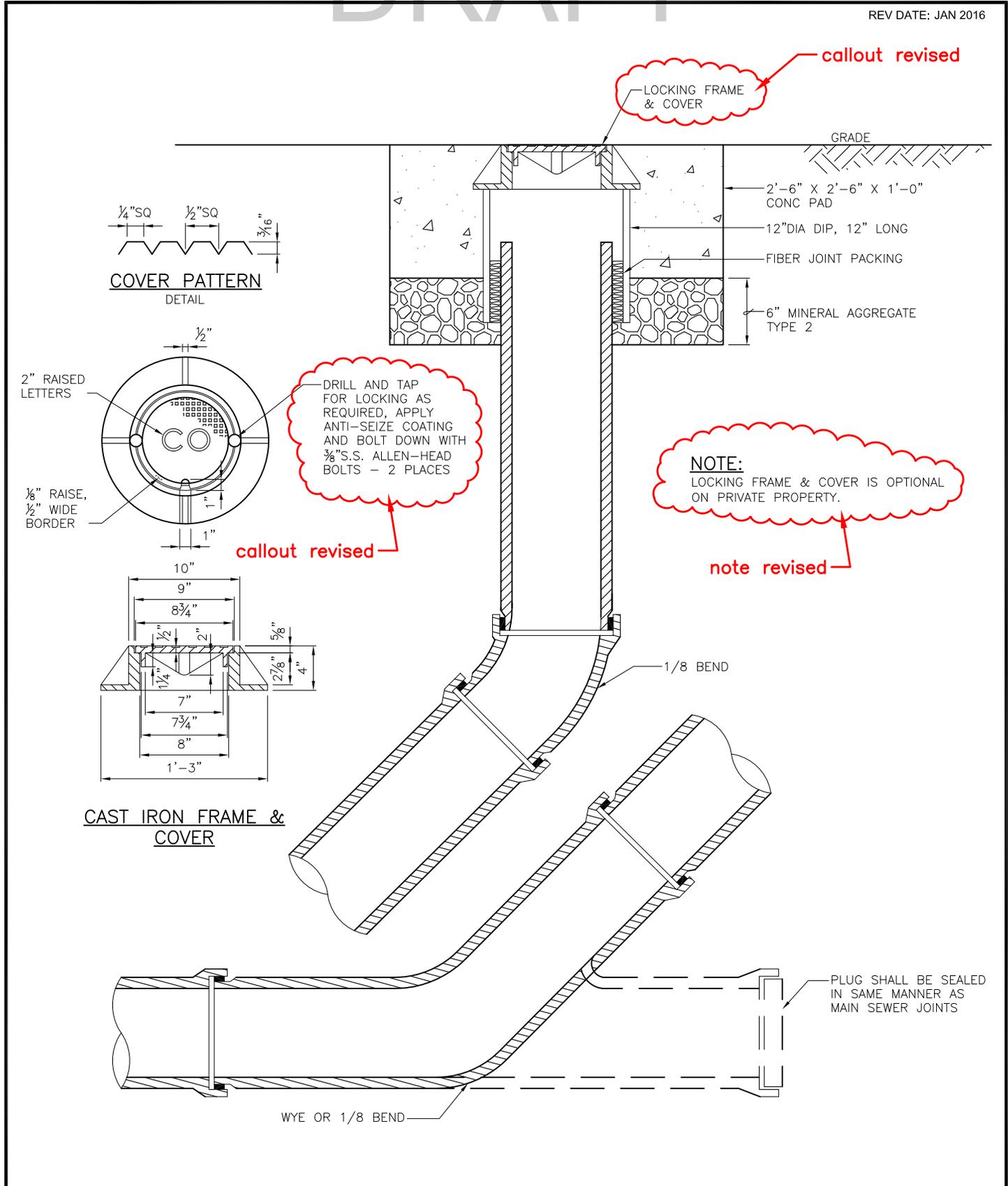


City of Seattle

NOT TO SCALE

BEEHIVE GRATE FOR
BIORETENTION

DRAFT



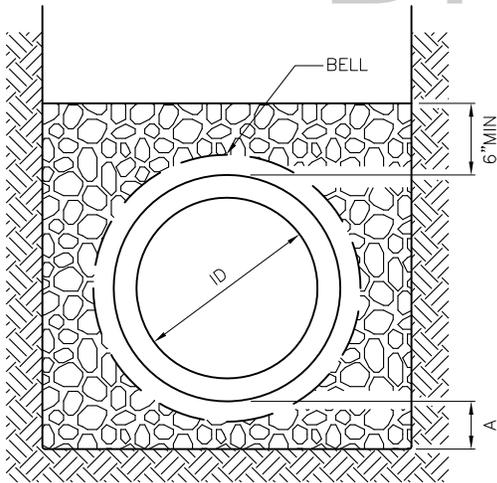
REF STD SPEC SEC 7-19



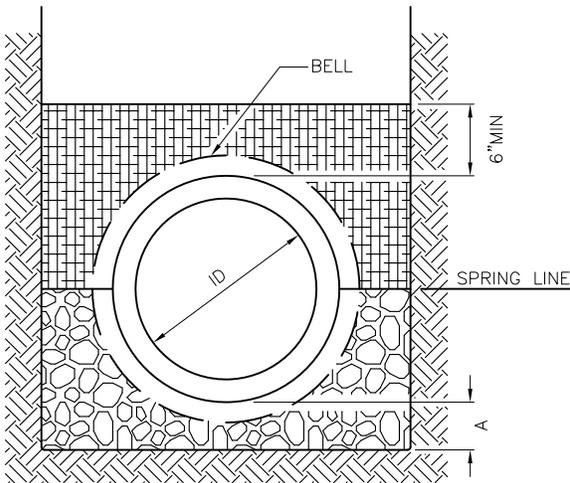
City of Seattle

NOT TO SCALE

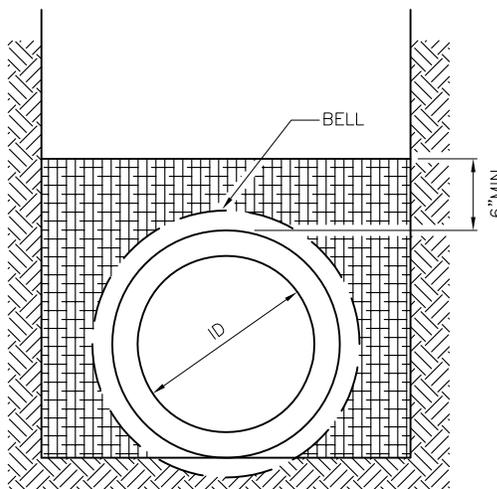
8" CLEAN-OUT



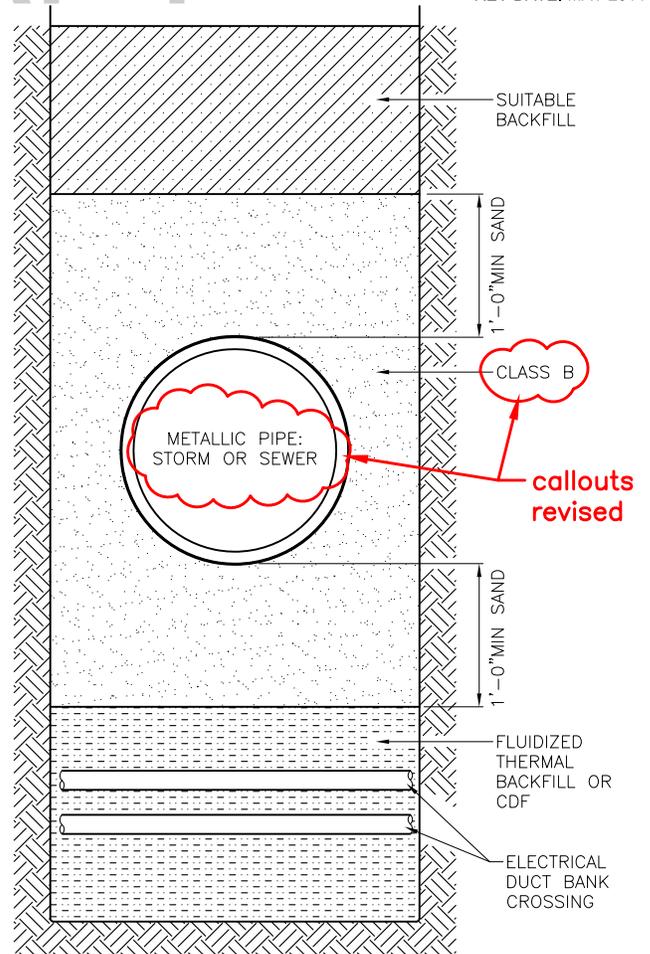
CLASS B BEDDING



CLASS C BEDDING



CLASS D BEDDING



SAND BEDDING AT TRENCH CROSSING OF METAL PIPE

AT METALLIC PIPE CROSSING OF FLUIDIZED THERMAL BACKFILL OR CDF CONDUIT CROSSINGS



MINERAL AGGREGATE PER STD SPEC 9-03.16 TYPE 9 FOR DUCTILE IRON WHEN APPLICABLE OR CONCRETE PIPE TYPE 22 FOR VITRIFIED CLAY AND FLEXIBLE PIPE



SELECTED NATIVE MATERIAL PER STD SPEC 2-10.2(1)



SUITABLE BACKFILL



FLUIDIZED THERMAL BACKFILL PER SCL MATERIAL STD 7150.00 OR CDF (SEE CONTRACT DRAWINGS)



MINERAL AGGREGATE PER STD SPEC 9-03.16, TYPE 6 OR TYPE 7

revised

NOTES:

1. FOR TRENCH WIDTH SEE STD PLAN NO 284
2. A=4" WHEN ID IS LESS THAN 2'-6", A=6" WHEN ID IS 2'-6" OR MORE.
3. UNIFORMLY SUPPORT PIPE BARREL. EXCAVATE HOLES FOR BELLS AND COUPLING.

REF STD SPEC SEC 2-10.2, 7-11, 7-17, 9-03.16

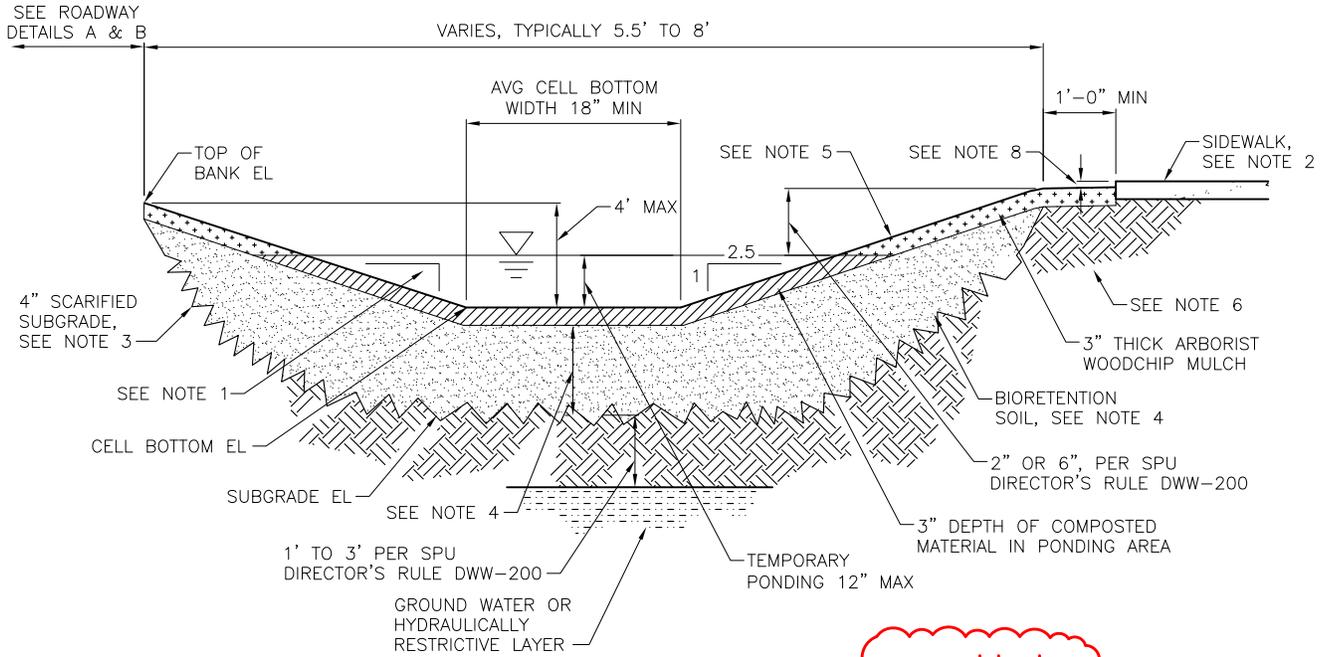


City of Seattle

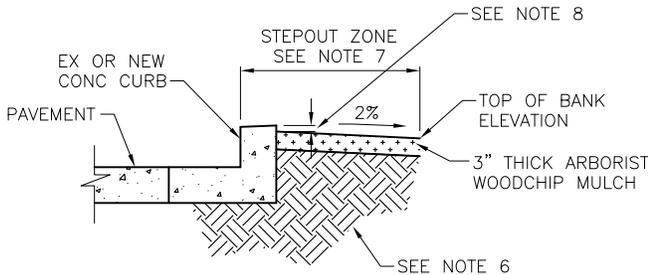
NOT TO SCALE

**PIPE BEDDING
SEWER/STORM DRAIN**

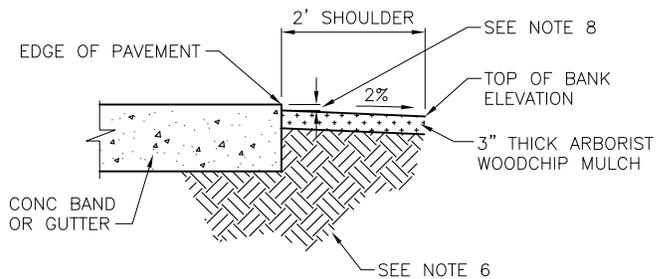
DRAFT



new std plan



DETAIL A
CURBED ROADWAY
(ADJACENT TO PARKING ZONE)



DETAIL B
CURBLESS ROADWAY

NOTES:

1. TYPICAL MAXIMUM SLOPE ALLOWED IS 2.5H=1V, 3H=1V MAX WHEN WITHIN 50- FEET OF INTERSECTIONS OR CURBLESS ROADWAY.
2. BIORETENTION OVERFLOW ELEVATIONS MUST BE SET BELOW SIDEWALK ELEVATION.
3. SCARIFY SUBGRADE 4" MIN IN THE AREA SUBJECT TO TEMPORARY PONDING BEFORE BIORETENTION SOIL INSTALLATION.
4. PROVIDE 1.5' MIN BIORETENTION SOIL FOR WATER QUALITY TREATMENT PER STORMWATER CODE REQUIREMENT.
5. CELL MUST BE PLANTED PER APPROVED LANDSCAPE PLAN.
6. SOIL AT THE EDGE MUST BE UNDISTURBED NATIVE SOIL OR APPROVED SOIL COMPACTED TO 95% DENSITY.
7. FACE OF CURB TO TOP OF SLOPE MUST BE MIN 2'-0" FOR NON-MAJOR ARTERIAL STREET, MIN 4'-0" FOR MAJOR ARTERIAL STREET.
8. PROVIDE MIN ONE INCH GAP BETWEEN TOP OF WALKS, CURBS, PAVEMENTS AND DRIVEWAYS AND TOP OF ARBORIST WOODCHIP MULCH.

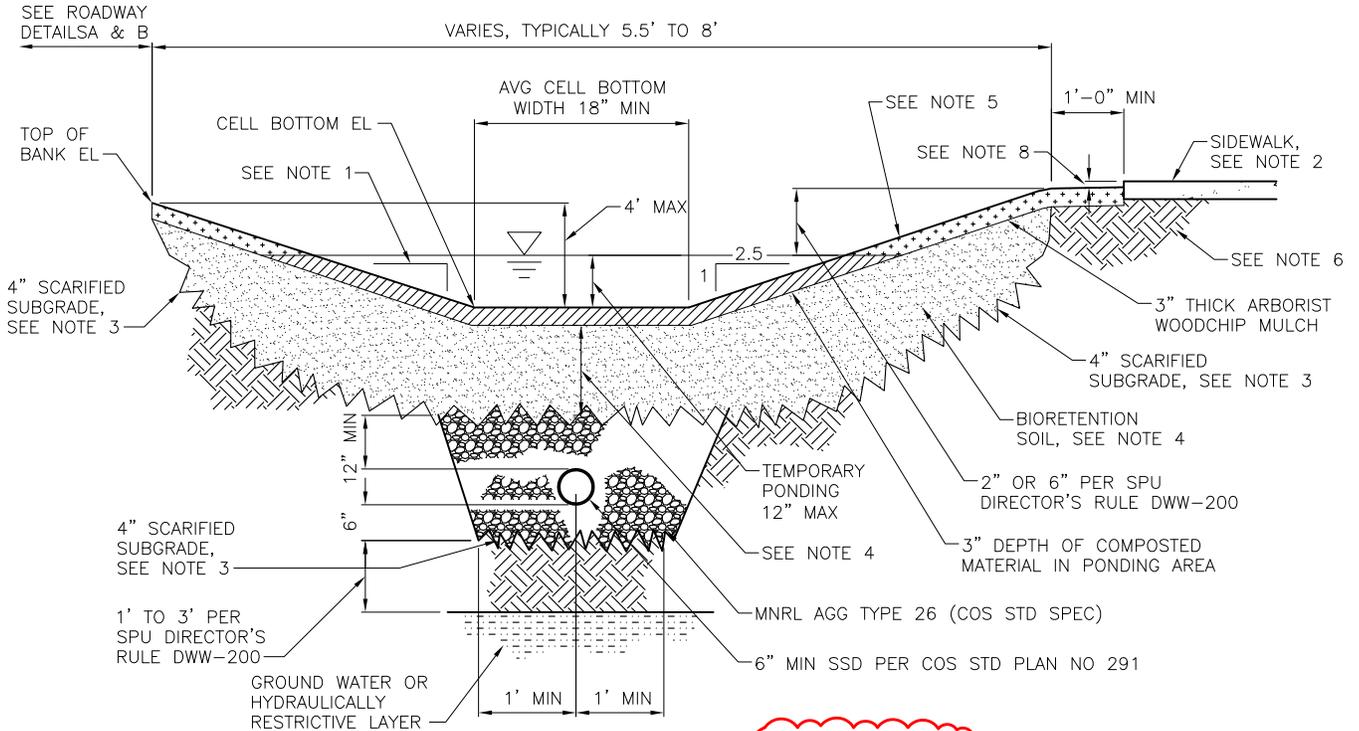
REF STD SPEC SEC 7-21



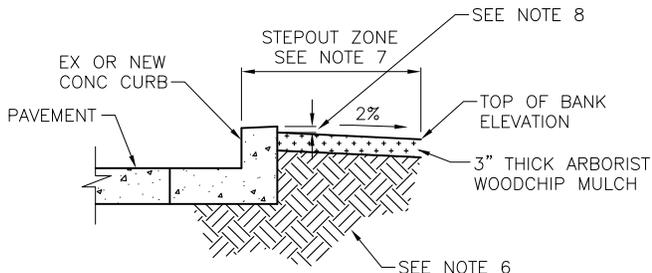
City of Seattle

NOT TO SCALE

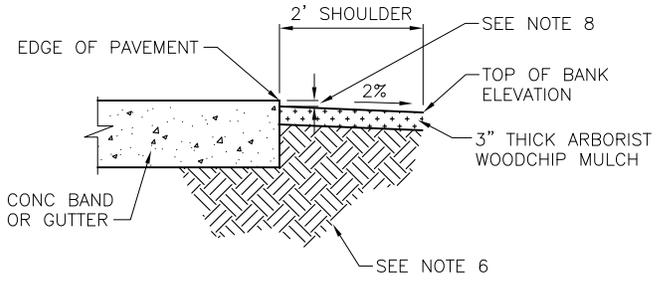
**INFILTRATING BIORETENTION
WITH SLOPED SIDES**



new std plan



DETAIL A
CURBED ROADWAY
(ADJACENT TO PARKING ZONE)



DETAIL B
CURBLESS ROADWAY

NOTES:

1. TYPICAL MAXIMUM SLOPE ALLOWED IS 2.5H=1V, 3H=1V MAX WHEN WITHIN 50- FEET OF INTERSECTIONS OR CURBLESS ROADWAY.
2. BIORETENTION OVERFLOW ELEVATIONS MUST BE SET BELOW SIDEWALK ELEVATION.
3. SCARIFY SUBGRADE 4" MIN IN THE AREA SUBJECT TO TEMPORARY PONDING BEFORE BIORETENTION SOIL INSTALLATION.
4. PROVIDE 1.5' MIN BIORETENTION SOIL FOR WATER QUALITY TREATMENT PER STORMWATER CODE REQUIREMENT.
5. CELL MUST BE PLANTED PER APPROVED LANDSCAPE PLAN.
6. SOIL AT THE EDGE MUST BE UNDISTURBED NATIVE SOIL OR APPROVED SOIL COMPACTED TO 95% DENSITY.
7. FACE OF CURB TO TOP OF SLOPE MUST BE MIN 2'-0" FOR NON-MAJOR ARTERIAL STREET, MIN 4'-0" FOR MAJOR ARTERIAL STREET.
8. PROVIDE MIN ONE INCH GAP BETWEEN TOP OF WALKS, CURBS, PAVEMENTS AND DRIVEWAYS AND TOP OF ARBORIST WOODCHIP MULCH.

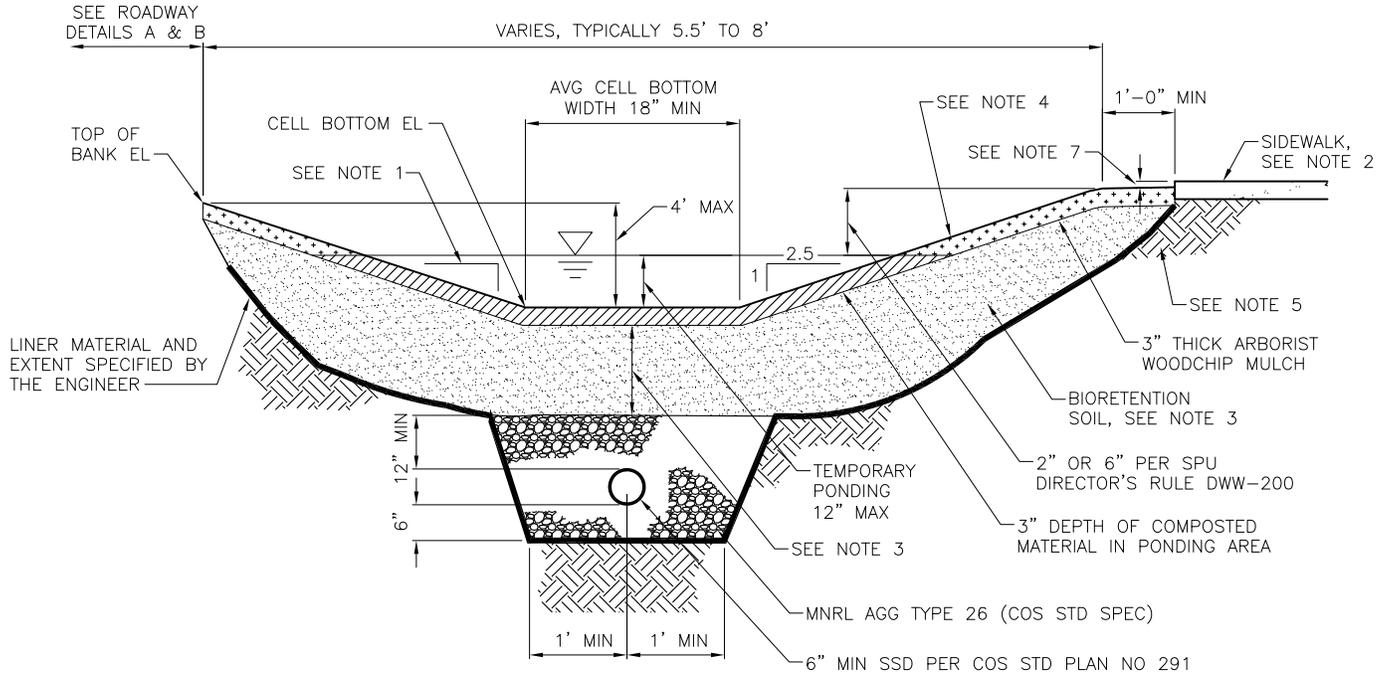
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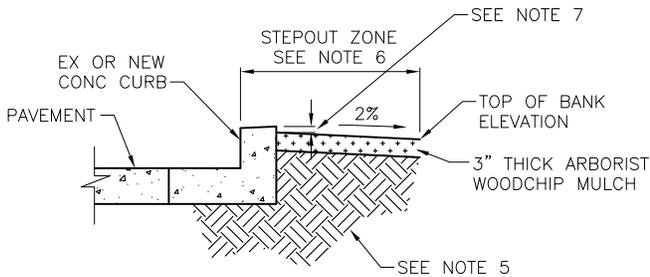
City of Seattle

NOT TO SCALE

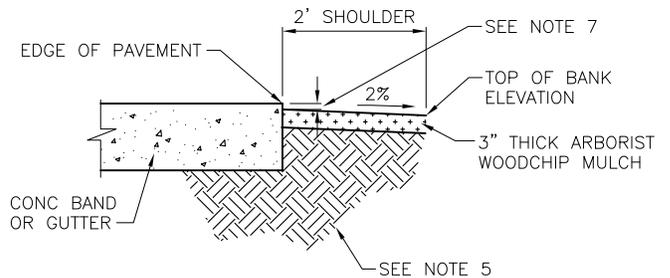
**INFILTRATING BIORETENTION
WITH SLOPED SIDES
& UNDER DRAIN**



new std plan



DETAIL A
CURBED ROADWAY
(ADJACENT TO PARKING ZONE)



DETAIL B
CURBLESS ROADWAY

NOTES:

1. TYPICAL MAXIMUM SLOPE ALLOWED IS 2.5H=1V, 3H=1V MAX WHEN WITHIN 50- FEET OF INTERSECTIONS OR CURBLESS ROADWAY.
2. BIORETENTION OVERFLOW ELEVATIONS MUST BE SET BELOW SIDEWALK ELEVATION.
3. PROVIDE 1.5' MIN BIORETENTION SOIL FOR WATER QUALITY TREATMENT PER STORMWATER CODE REQUIREMENT.
4. CELL MUST BE PLANTED PER APPROVED LANDSCAPE PLAN.
5. SOIL AT THE EDGE MUST BE UNDISTURBED NATIVE SOIL OR APPROVED SOIL COMPACTED TO 95% DENSITY.
6. FACE OF CURB TO TOP OF SLOPE MUST BE MIN 2'-0" FOR NON-MAJOR ARTERIAL STREET, MIN 4'-0" FOR MAJOR ARTERIAL STREET.
7. PROVIDE MIN ONE INCH GAP BETWEEN TOP OF WALKS, CURBS, PAVEMENTS AND DRIVEWAYS AND TOP OF ARBORIST WOODCHIP MULCH.

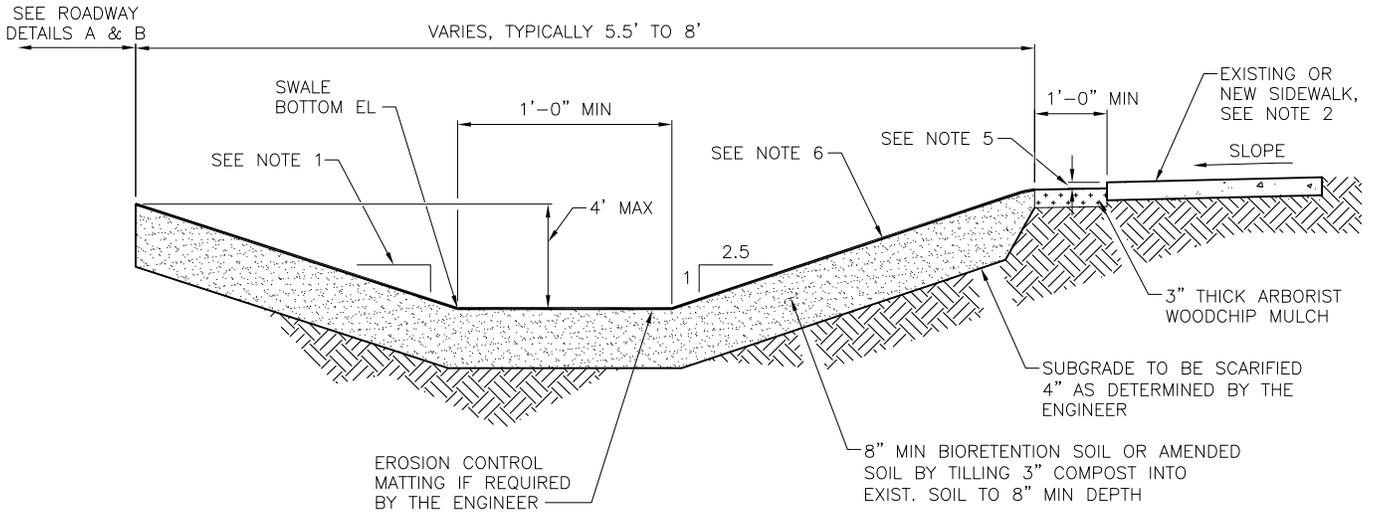
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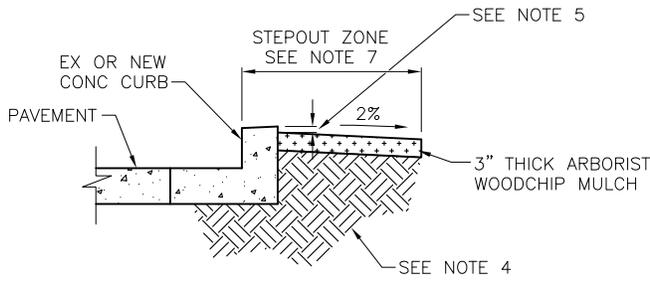
City of Seattle

NOT TO SCALE

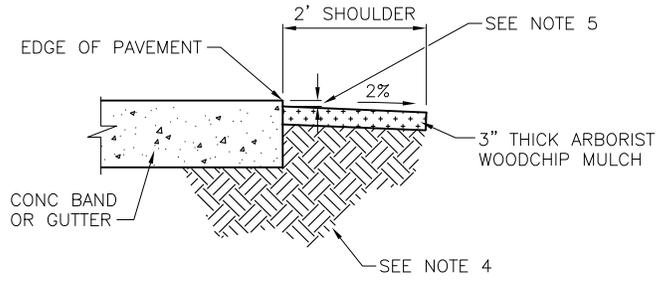
**NON-INFILTRATING BIORETENTION
WITH SLOPED SLIDES
& UNDER DRAIN**



new std plan



DETAIL A
CURBED ROADWAY
(ADJACENT TO PARKING ZONE)



DETAIL B
CURBLESS ROADWAY

- NOTES:**
1. TYPICAL MAXIMUM SLOPE ALLOWED IS 2.5H=1V, 3H=1V MAX WHEN WITHIN 50- FEET OF INTERSECTIONS OR CURBLESS ROADWAY.
 2. CONVEYANCE SWALE OVERFLOW ELEVATIONS MUST BE SET BELOW SIDEWALK ELEVATION.
 3. LONGITUDINAL SLOPE GREATER THAN OR EQUAL TO 4%, CHECK DAM REQUIRED.
 4. UNDISTURBED NATIVE SOIL OR APPROVED SOIL COMPACTED TO 95% DENSITY.
 5. PROVIDE MIN ONE INCH GAP BETWEEN TOP OF WALKS, CURBS, PAVEMENTS AND DRIVEWAYS AND TOP OF TREATMENT LAYER.
 6. PLANTING PER APPROVED LANDSCAPE PLAN.
 7. FACE OF CURB TO TOP OF SLOPE MUST BE MIN 2'-0" FOR NON-MAJOR ARTERIAL STREETS, MIN 4'-0" FOR MAJOR ARTERIAL STREETS.

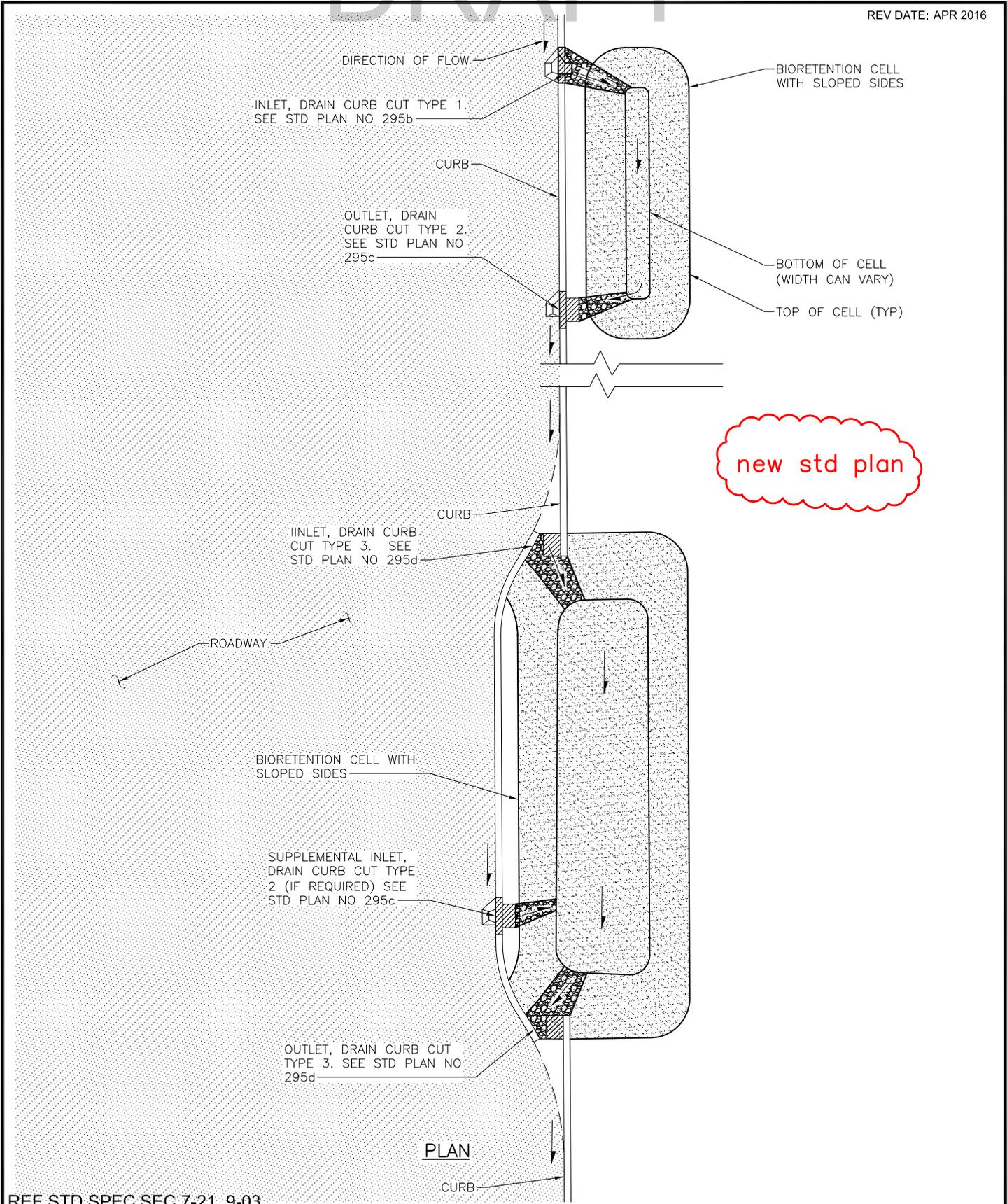
REF STD SPEC SEC 7-21



City of Seattle

NOT TO SCALE

VEGETATED CONVEYANCE SWALE
(NOT FOR WATER QUALITY TREATMENT)



REF STD SPEC SEC 7-21, 9-03

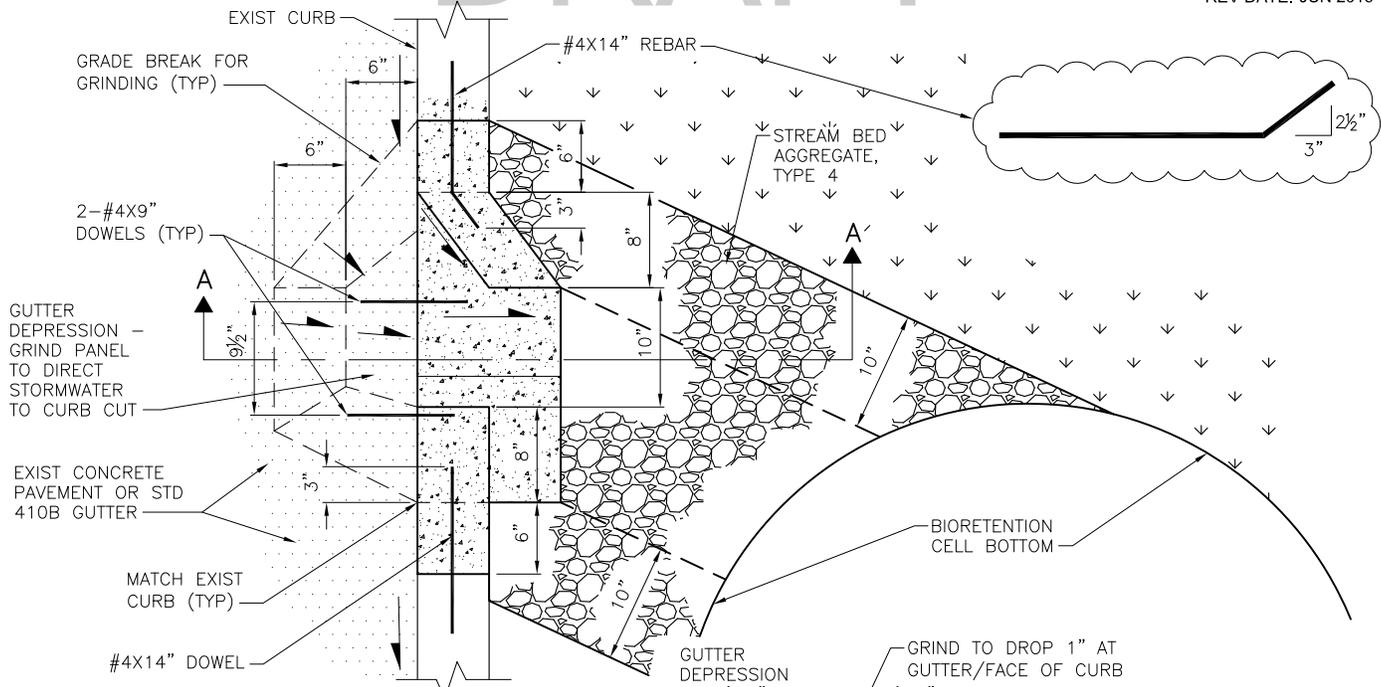


City of Seattle

NOT TO SCALE

TYPICAL DRAIN CURB CUT LOCATION FOR BIORETENTION WITH SLOPED SIDES

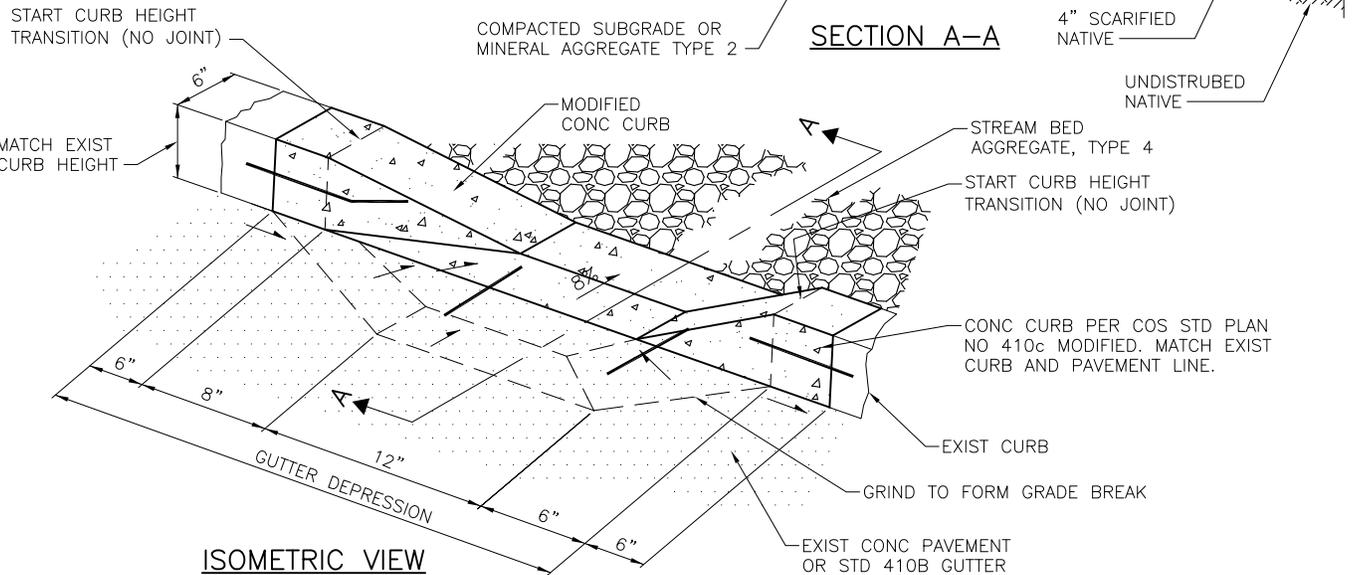
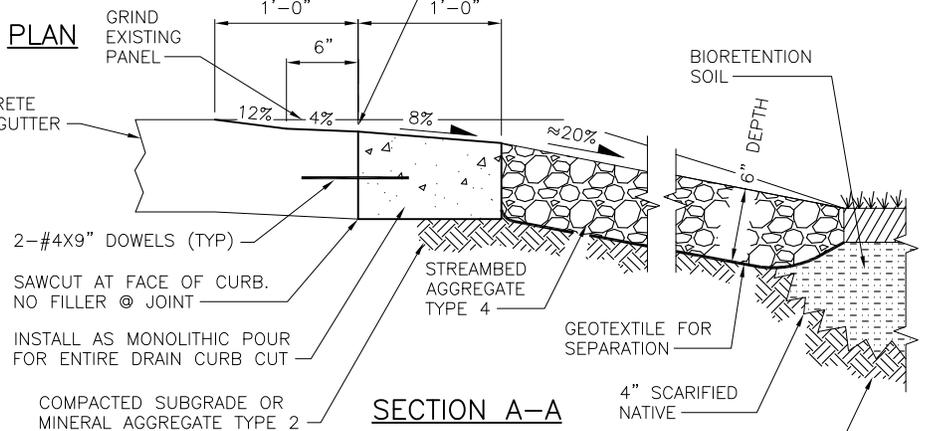
DRAFT



new std plan

NOTES:

1. DRAIN CURB CUTS MUST NOT BE LOCATED WITHIN CONCRETE ROAD PANEL JOINT.
2. USE DRAIN CURB CUT TYPE 1 WHERE GUTTER LINE LONGITUDINAL SLOPE IS 0 TO 5%. WHERE LONGITUDINAL SLOPE IS GREATER THAN 5%, DRAIN CURB CUT OPENING WILL BE DESIGNED BY THE ENGINEER.



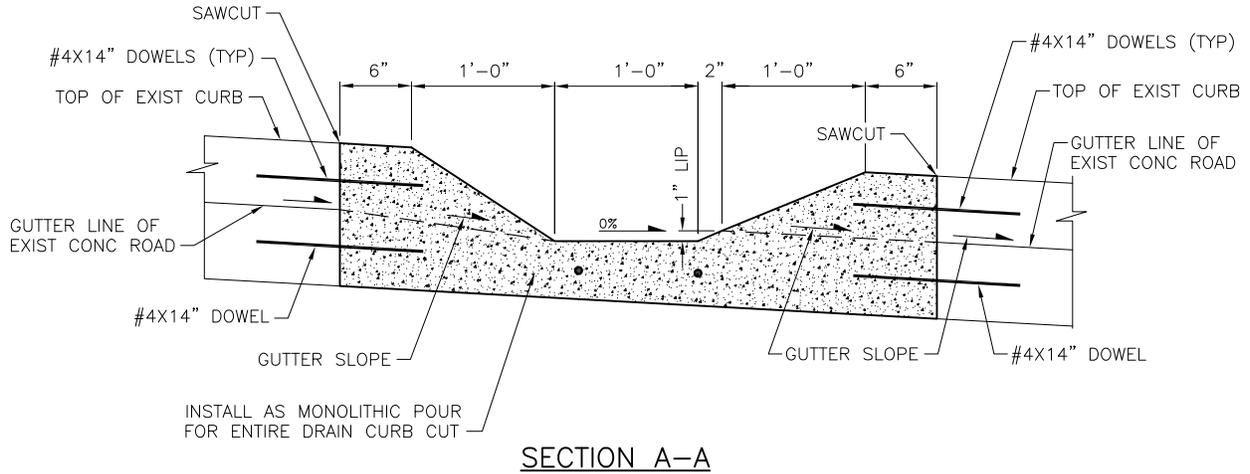
REF STD SPEC SEC 7-21, 9-03



City of Seattle

NOT TO SCALE

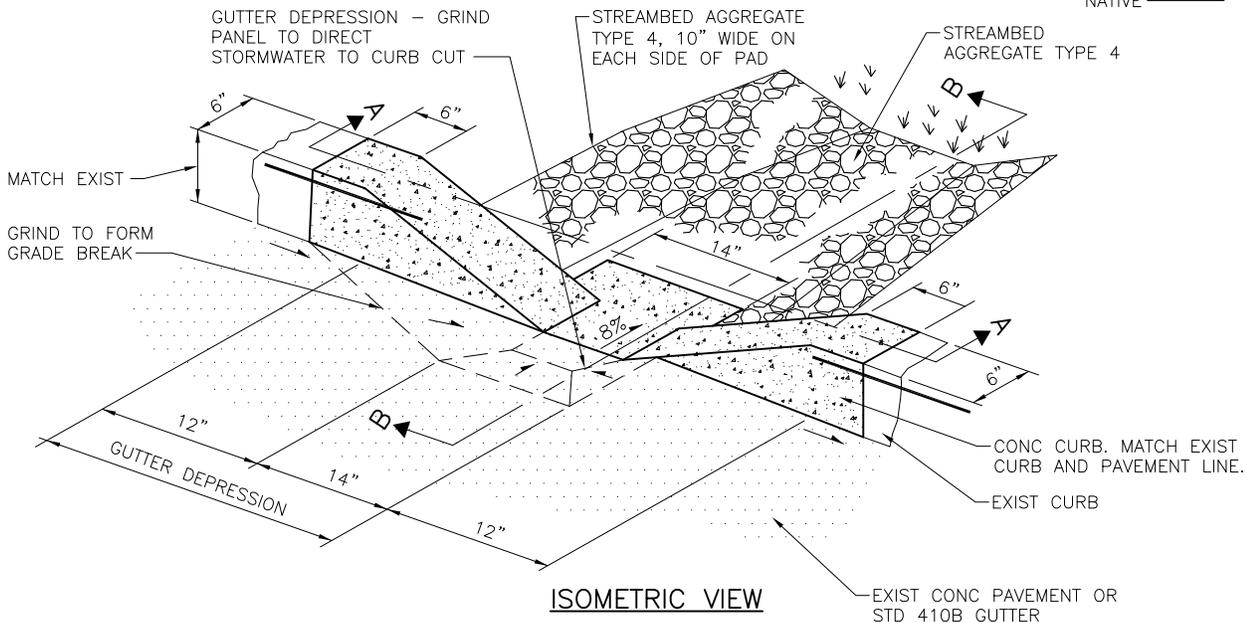
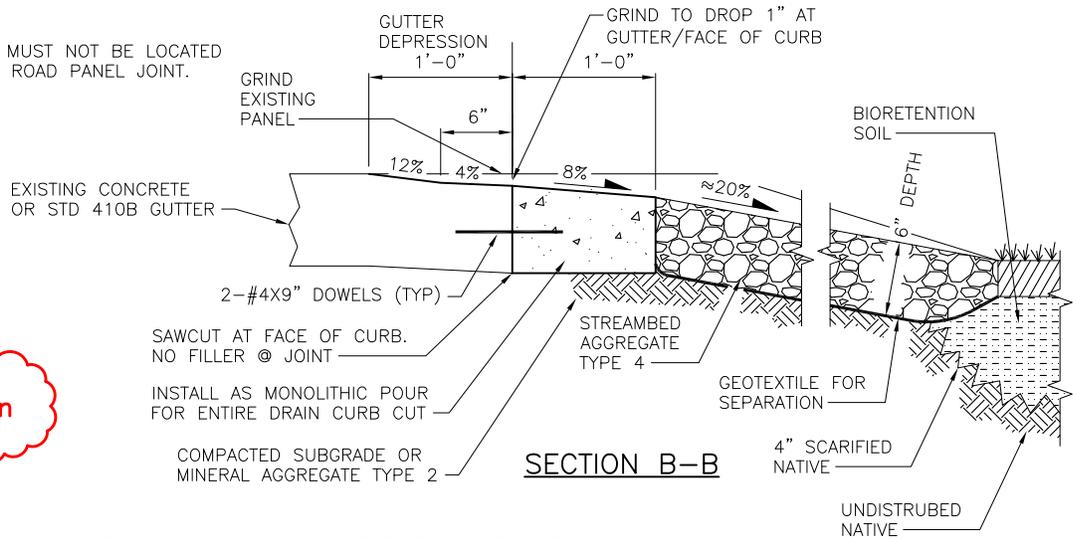
DRAIN CURB CUT TYPE 1



NOTES:

1. DRAIN CURB CUT MUST NOT BE LOCATED WITHIN CONCRETE ROAD PANEL JOINT.

new std plan



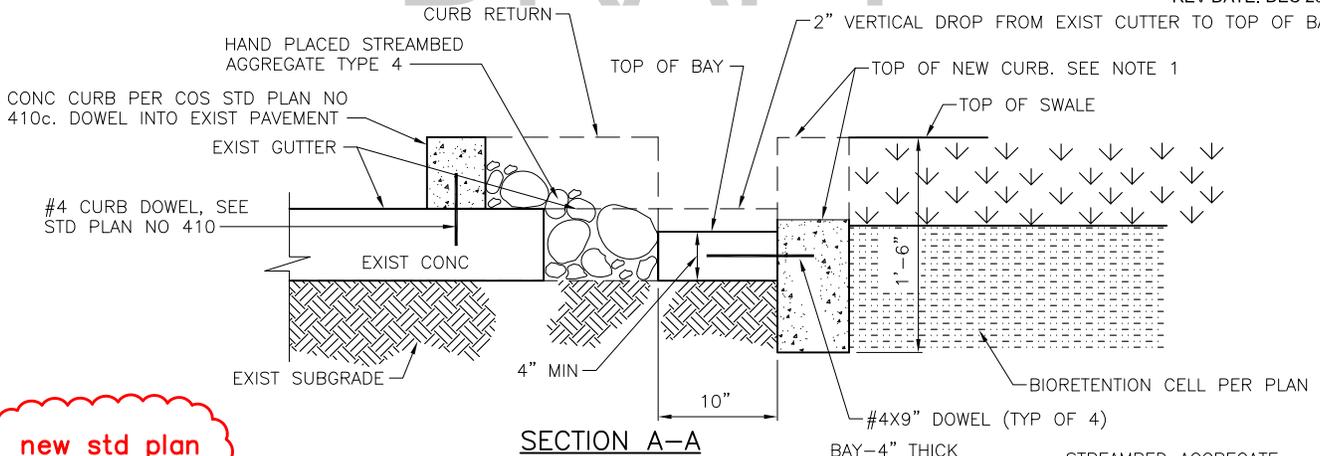
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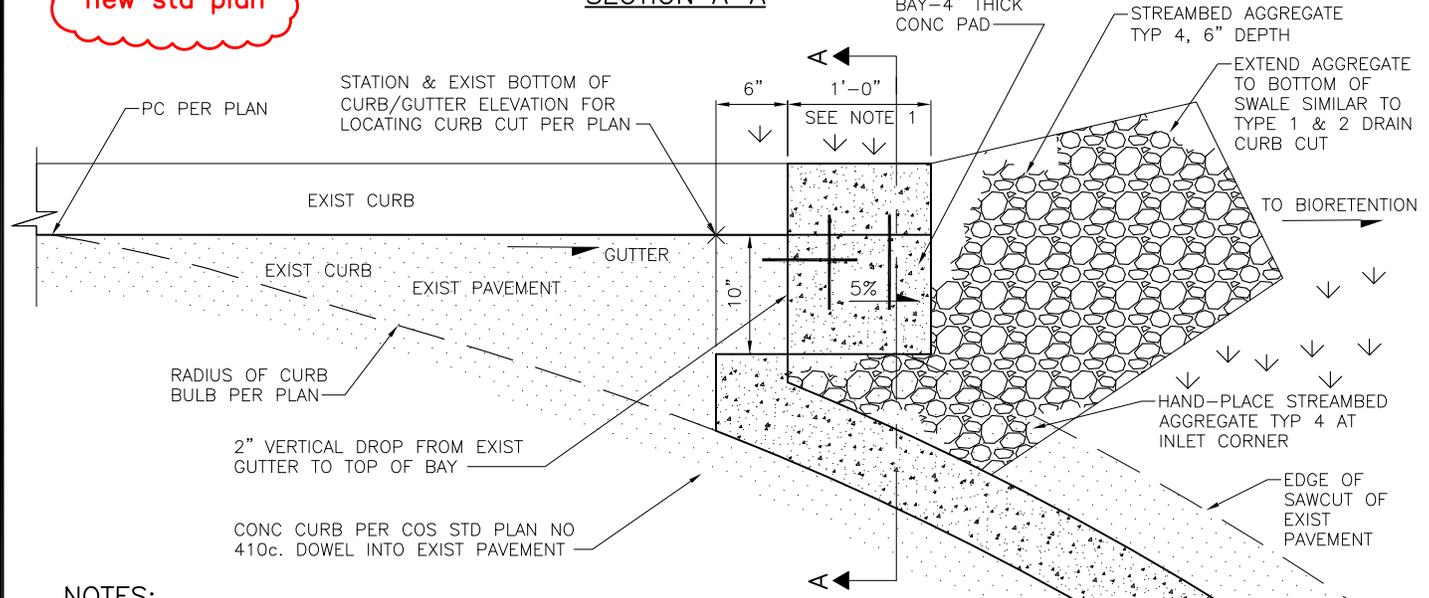
City of Seattle

NOT TO SCALE

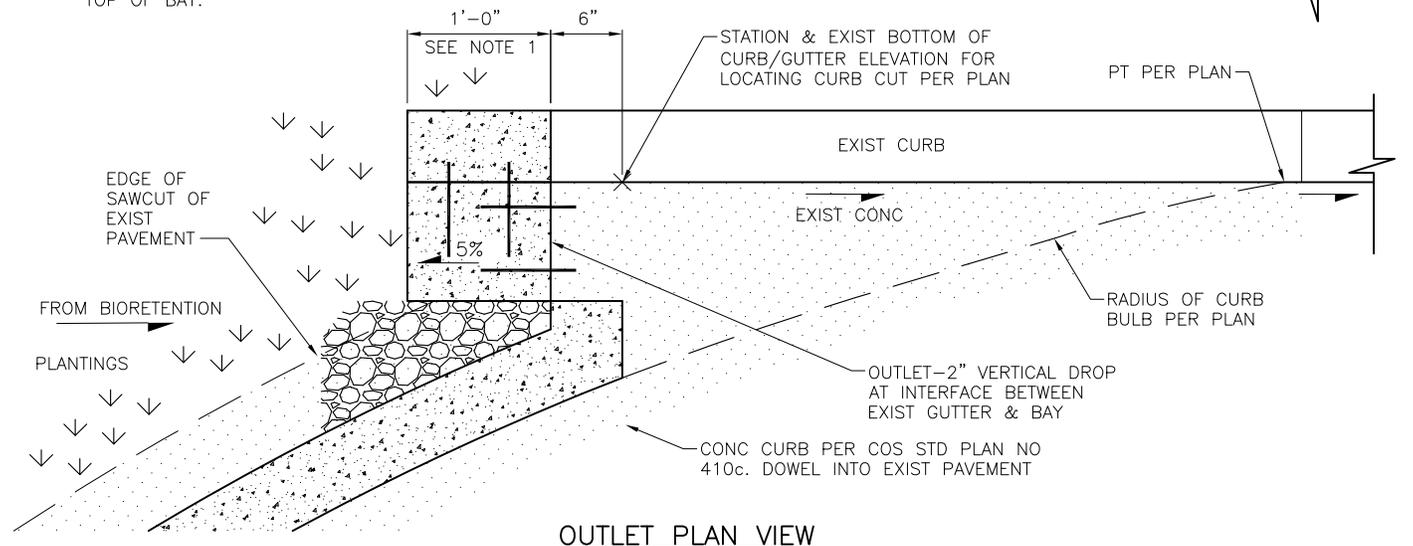
DRAIN CURB CUT TYPE 2



new std plan



- NOTES:**
 1. TAPER CURB HEIGHT FROM TOP OF EXISTING CURB TO TOP OF BAY.



REF STD SPEC SEC 7-21, 9-03



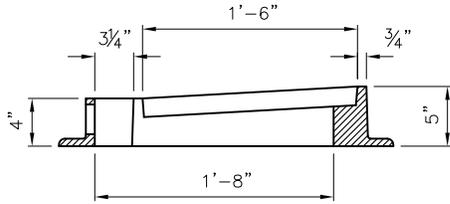
City of Seattle

NOT TO SCALE

DRAIN CURB CUT TYPE 3

DRAFT

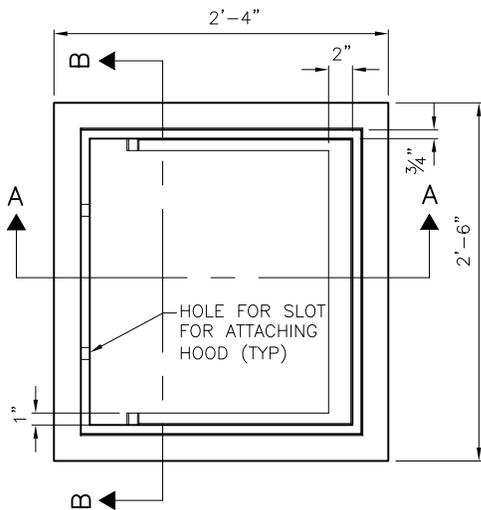
new std plan



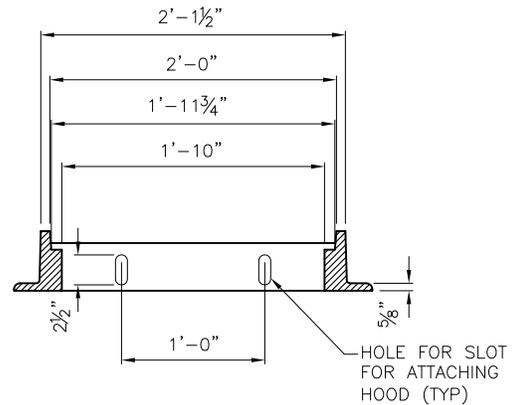
SECTION A-A

NOTES:

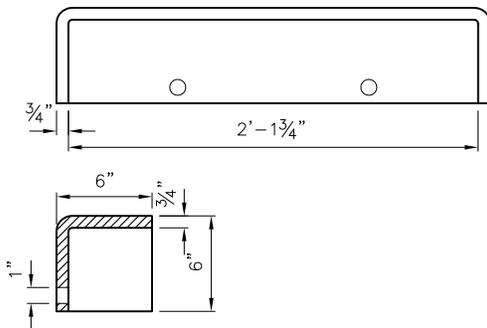
1. ATTACH THE HOOD TO THE FRAME WITH TWO 3/4" X 2" HEX HEAD BOLTS, NUTS, AND OVERSIZE WASHERS. THE WASHERS MUST HAVE DIAMETERS ADEQUATE TO ENSURE FULL BEARING ACROSS THE SLOTS.
2. ONLY DUCTILE IRON VANED GRATES MUST BE USED.



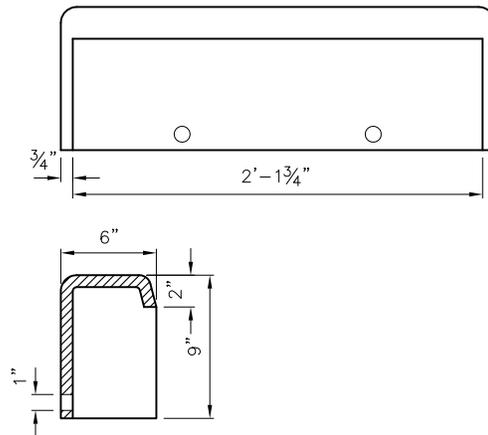
FRAME DETAIL



SECTION B-B



6" HOOD



9" HOOD

REF STD SPEC SEC 7-05



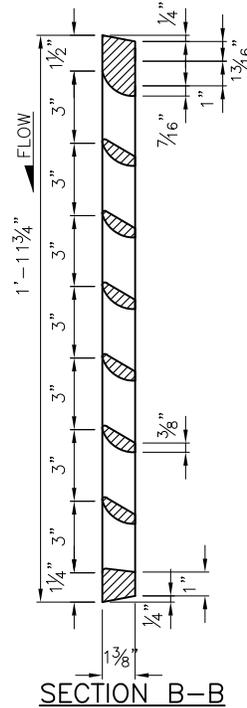
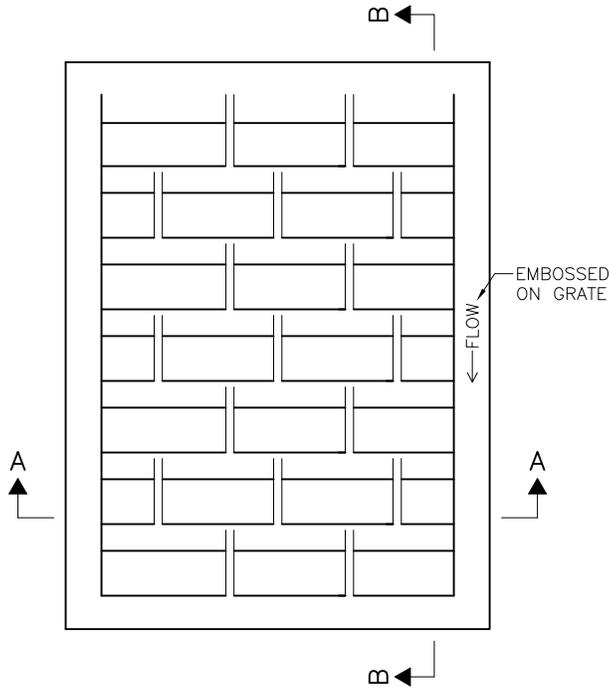
City of Seattle

NOT TO SCALE

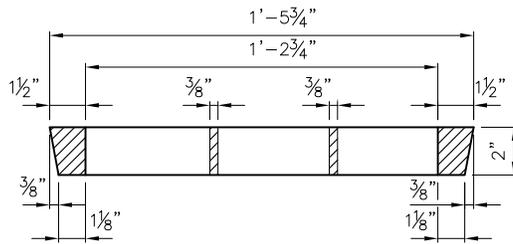
CURB INLET FRAME

DRAFT

new std plan



GRATE MATERIAL:
DUCTILE IRON



SECTION A-A

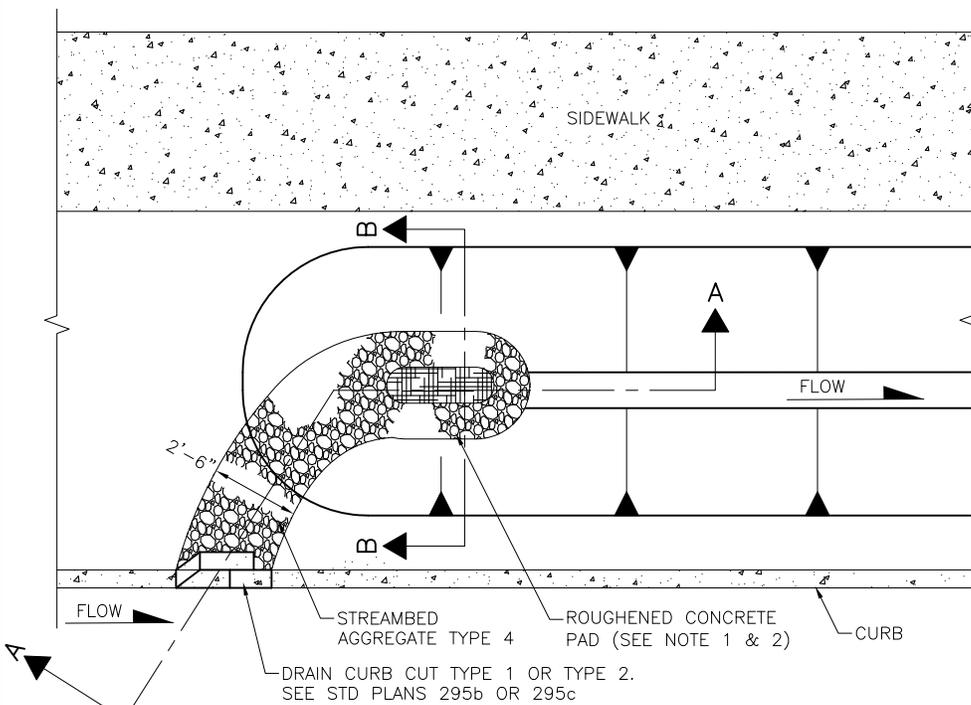
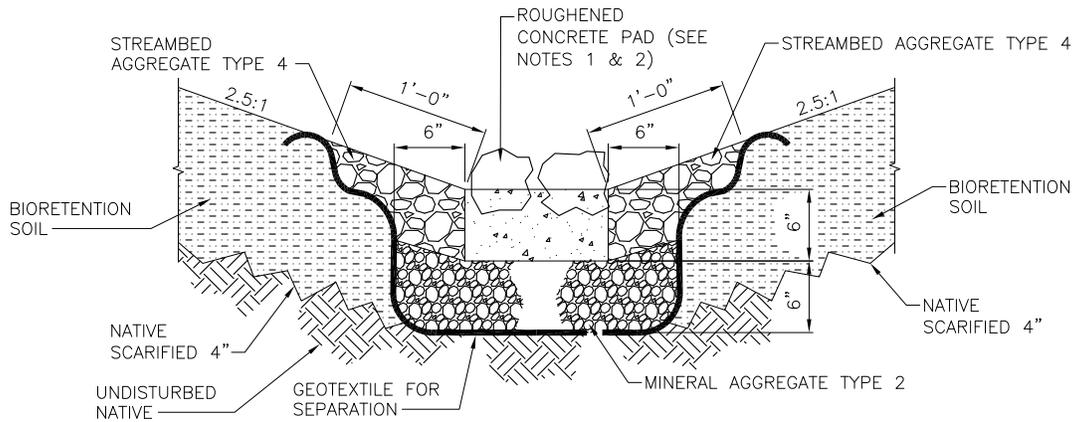
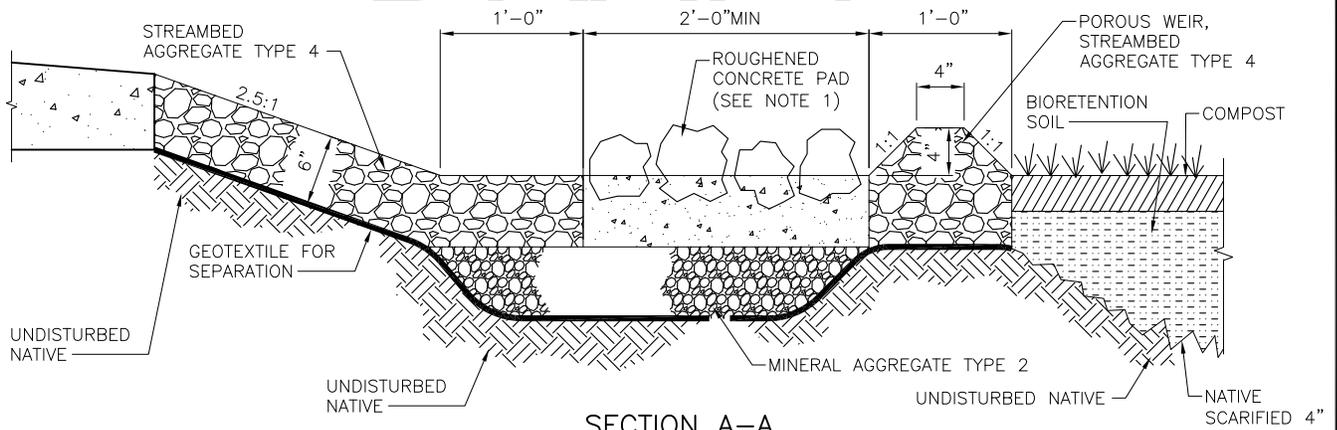
REF STD SPEC SEC



City of Seattle

NOT TO SCALE

CURB INLET VANED GRATE



new std plan

NOTES:

1. ROUGHENED CONCRETE PAD MUST BE MIN 2' LONG & 2.5 SF OR 5.0SF PER SPU DIRECTOR'S RULE 200
2. ROUGHENED CONCRETE PAD MUST BE CONSTRUCTED WITH COMMERCIAL CONCRETE (STD SPEC 6-02) EMBED WELL MIXED 6"-8" STREAMBED AGGREGATE TO CREATE ROUGHNESS. 50% MIN OF THE SURFACE MUST HAVE PROTRUDING AGGREGATE

PRESETTLING ZONE

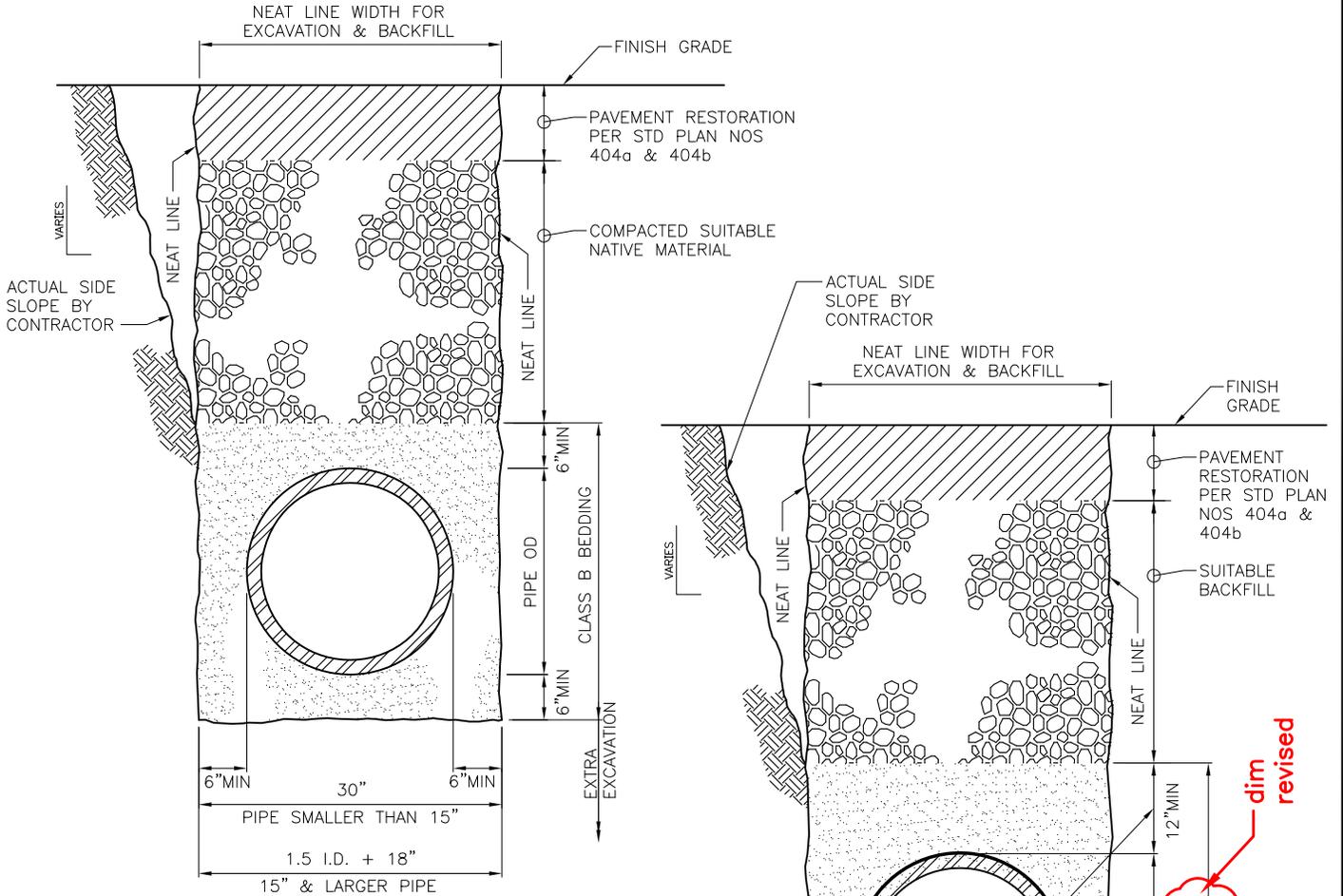
REF STD SPEC SEC 7-21, 9-03



City of Seattle

NOT TO SCALE

PRESETTLING ZONE



TYPICAL BEDDING

BEDDING AT TRENCH CROSSING

BEDDING MATERIAL

CLASS B:

- FOR DISTRIBUTION WATERMAIN, MINERAL AGGREGATE PER STD SPEC 9-03.16 TYPE 6 OR TYPE 7
- FOR TRANSMISSION WATERMAIN, MINERAL AGGREGATE PER STD SPEC 9-03.16 TYPE 9
- SPECIAL BEDDING TO BE INDICATED ON DRAWINGS

NOTES:

1. EXCAVATE FOR THE BELL TO ENSURE UNIFORM SUPPORT FOR THE PIPE BARREL
2. FOR FLUIDIZED THERMAL BACKFILL (FTB) OR CDF CROSSINGS OF METALLIC PIPE, INCREASE CLASS B SAND DEPTH & COVER TO 12" MIN & ENCASE METALLIC PIPE IN 8 MIL POLYETHYLENE ENCASEMENT FOR FULL TRENCH WIDTH. FLUIDIZED THERMAL BEDDING PER SCL MATERIAL STANDARD 7150.00

revised

note 3 added

9-03.16 added

dim revised

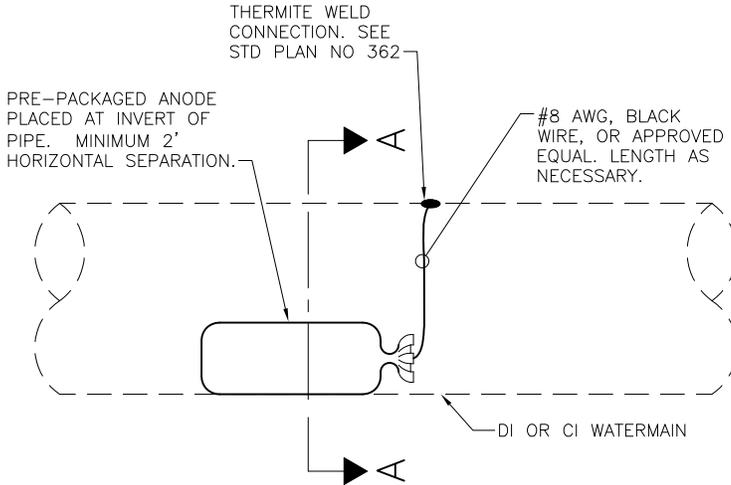
REF STD SPEC SEC 7-11, 7-17, 9-03.16



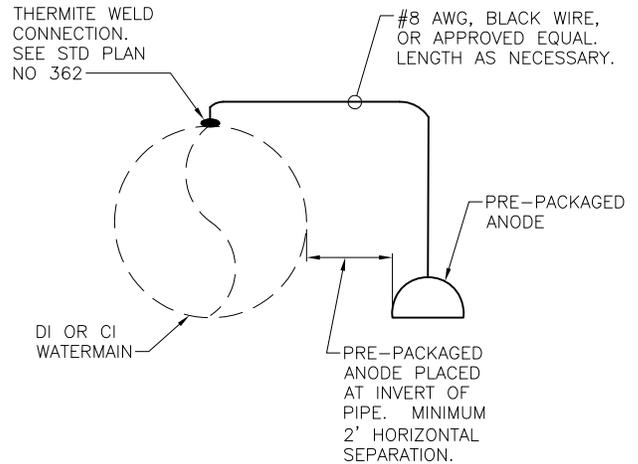
City of Seattle

NOT TO SCALE

WATERMAIN TRENCH AND BEDDING



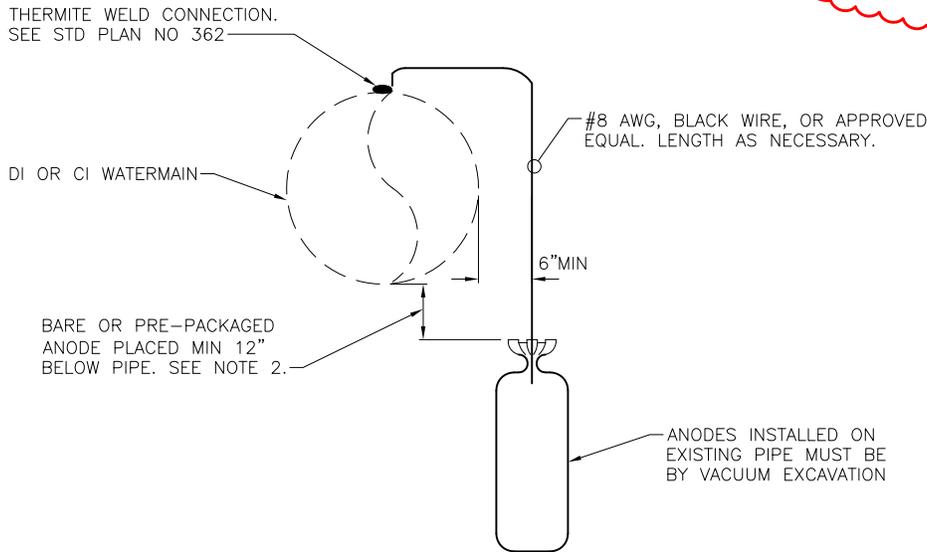
ELEVATION VIEW



SECTION A-A

TYPICAL SINGLE HORIZONTAL ANODE INSTALLATION

new std plan



TYPICAL SINGLE VERTICAL ANODE INSTALLATION

NOTES:

1. SPU CATHODIC PROTECTION MAY SPECIFY TYPE AND REQUIRED SPACING OF ANODE(S) LONGITUDINALLY ALONG WATER MAIN TO BE SHOWN IN DESIGN DRAWINGS. MAXIMUM SPACING MUST BE 36' UNLESS OTHERWISE NOTED ON PLANS.
2. FOR VERTICAL ANODE INSTALLATION, IF ANODE IS NOT PRE-PACKAGED, BARE ANODE MUST BE INSTALLED W/MIN 6" SACRIFICIAL ANODE BACKFILL PER SPEC SECTION 9-30.12(6), AROUND ALL SIDES OF ANODE.
3. ANODE SIZE MUST BE 17LB HIGH POTENTIAL MAGNESIUM ANODE, UNLESS OTHERWISE NOTED ON THE PLANS.
4. PLACE RED "CAUTION" OR "DANGER" TAPE 6" OVER ANODE WIRES. TAPE MUST BE MIN 3" WIDE.
5. BACKFILL OVER ANODE WITH SUITABLE NATIVE MATERIAL OR APPROVED EQUAL.

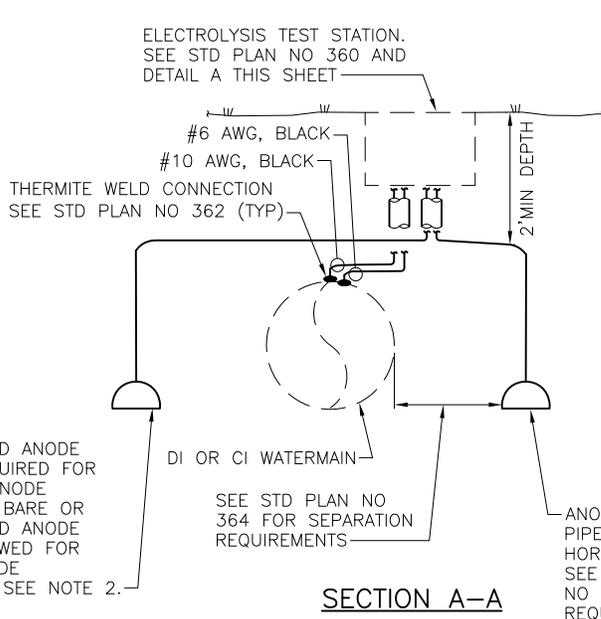
REF STD SPEC SEC 7-11, 9-30



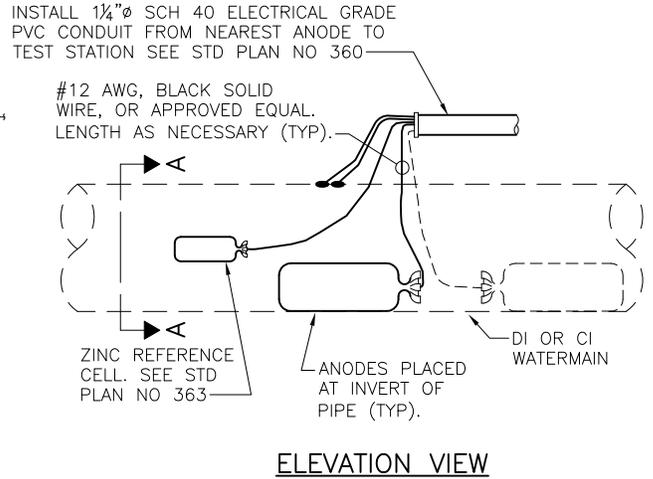
City of Seattle

NOT TO SCALE

SACRIFICIAL ANODE BONDED TO PIPE INSTALLATION DETAILS

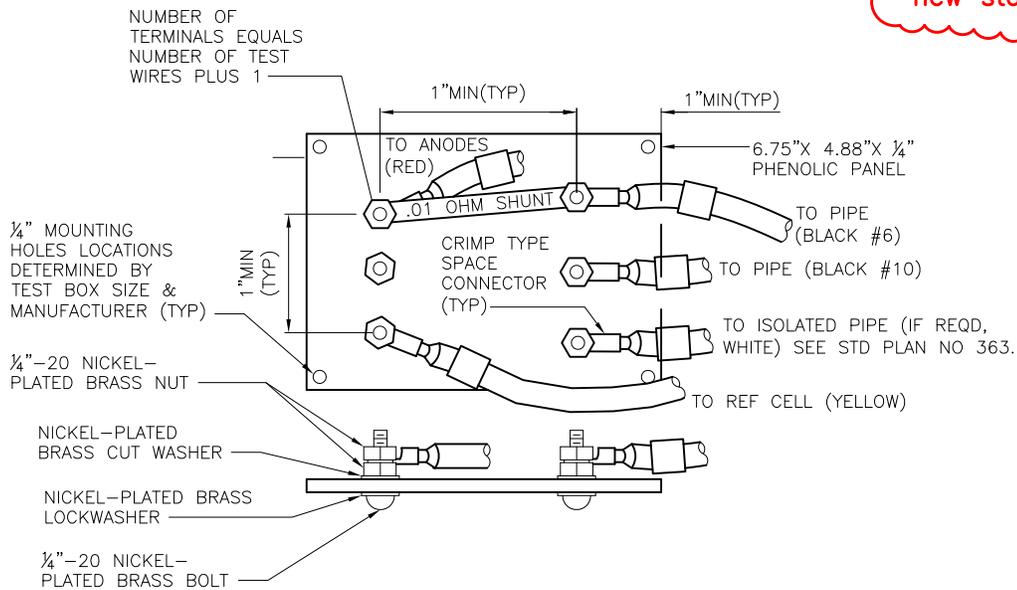


SECTION A-A



ELEVATION VIEW

new std plan



TERMINAL BOARD, DETAIL A

NOTES:

1. REQUIRED SPACING OF ANODE(S) TO BE SHOWN IN DESIGN DRAWINGS.
2. FOR VERTICAL INSTALLATION, IF ANODE IS NOT PRE-PACKAGED, BARE ANODE MUST BE INSTALLED W/ MIN 6" SACRIFICIAL ANODE BACKFILL PER SPEC SECTION 9-30.12(6), AROUND ALL SIDES OF ANODE.
3. ANODE SIZE MUST BE 17LB HIGH POTENTIAL MAGNESIUM ANODE, UNLESS OTHERWISE NOTED ON THE PLANS.
4. PLACE RED "CAUTION" OR "DANGER" TAPE 6" OVER ANODE WIRES AND CONDUIT. TAPE SHALL BE MIN 3" WIDE.
5. BACKFILL OVER ANODE WITH SUITABLE NATIVE MATERIAL OR APPROVED EQUAL.

REF STD SPEC SEC 7-11, 9-30

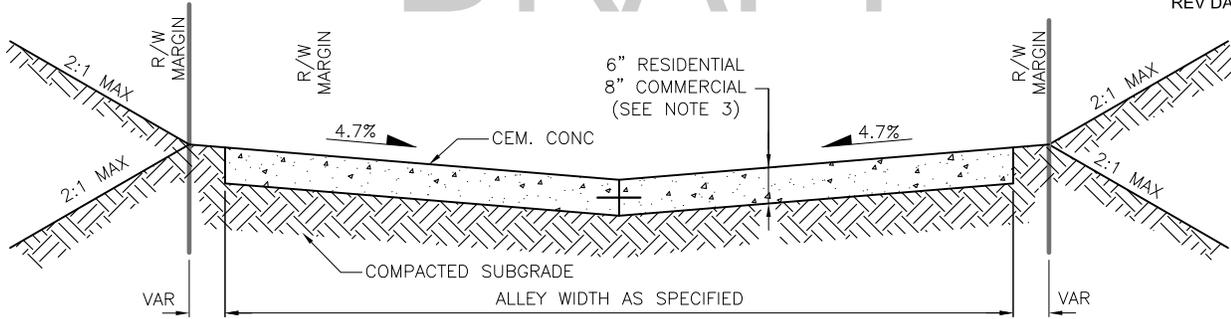


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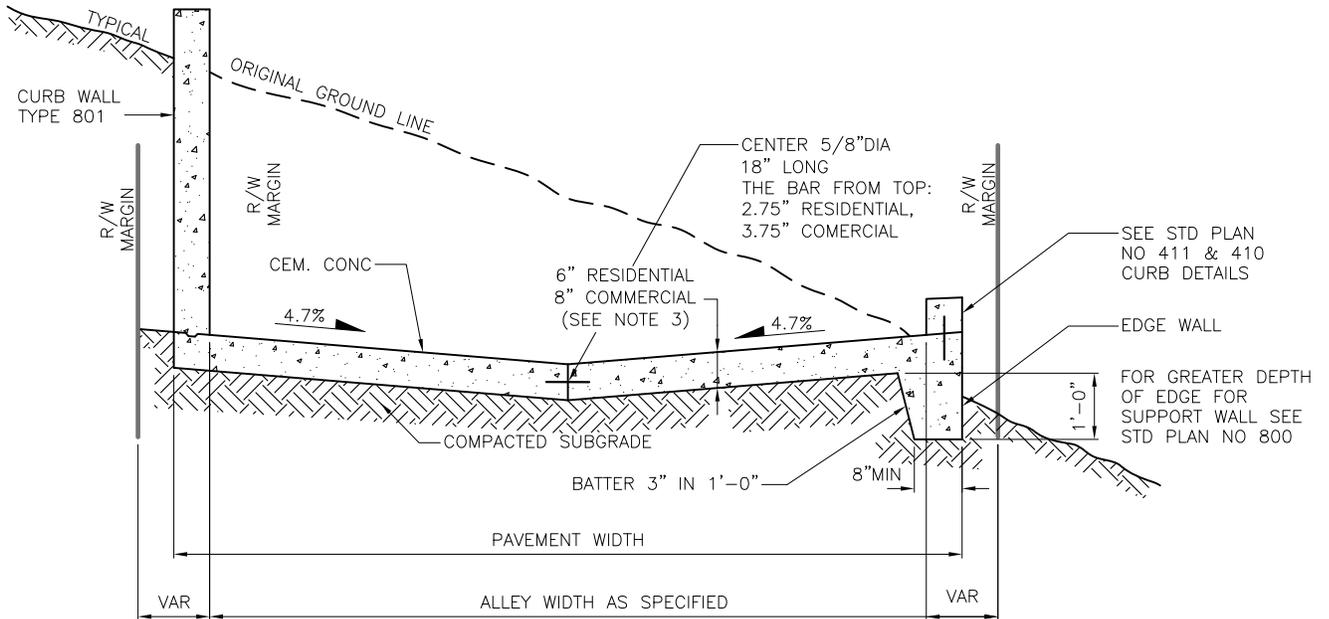
NOT TO SCALE

SACRIFICIAL ANODE INSTALLATION DETAILS

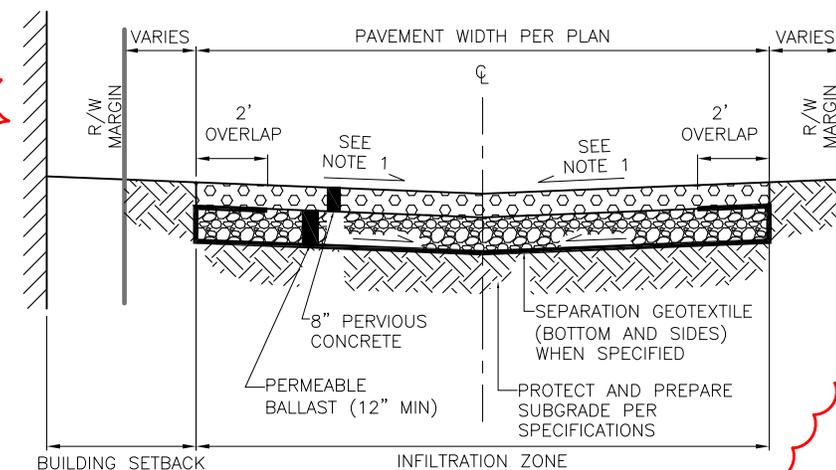
MULTIPLE ANODES CONNECTED AT TEST STATION



CONCRETE ALLEY PAVEMENT



CEMENT CONCRETE ALLEY PAVEMENT 403B-FOR SHALLOW EMBANKMENT AREA



PERVIOUS CONCRETE PAVEMENT

NOTES:

1. WHEN ALLEY PAVEMENT IS 16'-0" OR WIDER PLACE CONSTRUCTION JOINT WITH TIE BAR PER STD PLAN NO 405 ALONG CENTERLINE OF ALLEY.
2. FOR ADA ACCESSIBLE ACCESS TO ENTRY IN ALLEY CONSIDER ALTERNATIVE DESIGN; SUBJECT TO APPROVAL BY THE ENGINEER.
3. 8" OR AS SHOWN IN CONTRACT OR APPROVAL BY THE ENGINEER.
4. MIN CROSS SLOPE IS 1%
5. PERMEABLE BALLAST MUST BE MINERAL AGGREGATE TYPE 13, UNLESS DETERMINED OTHERWISE BY ENGINEER.

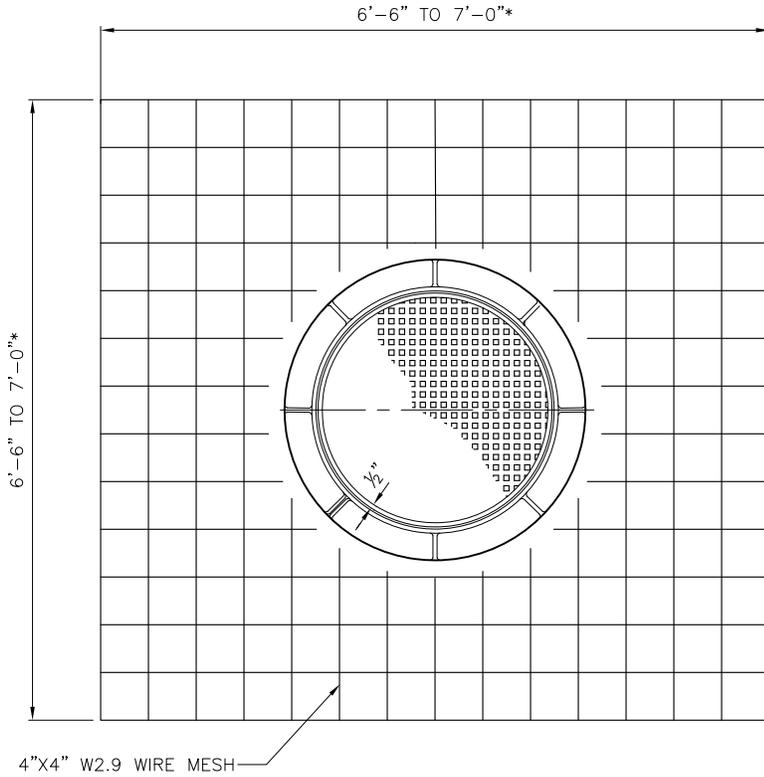
REF STD SPEC SEC 8-17, 8-19



City of Seattle

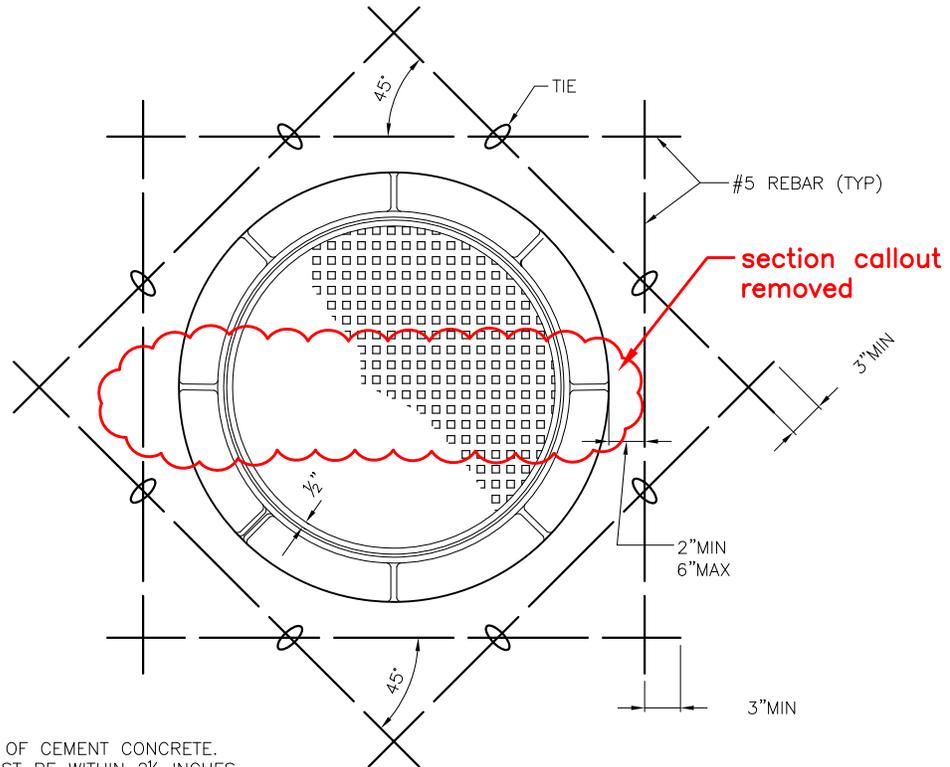
NOT TO SCALE

ROADWAY CEMENT CONCRETE ALLEY PAVEMENTS



NOTES:

1. PLACE WIRE MESH AT 1/2 DEPTH OF CEMENT CONCRETE.
2. *THE DIMENSIONS OF THE MESH MUST BE ADJUSTED WHERE PAVEMENT JOINTS ARE ENCOUNTERED.
3. NO REINFORCING STEEL MUST BE WITHIN 2 1/2 INCHES OF ANY CEMENT CONCRETE SURFACE OR JOINT.



NOTES:

1. PLACE REBAR AT 1/2 DEPTH OF CEMENT CONCRETE.
2. NO REINFORCING STEEL MUST BE WITHIN 2 1/2 INCHES (3 INCHES DESIRED) OF ANY CEMENT CONCRETE SURFACE OR JOINT.

REF STD SPEC SEC 5-05

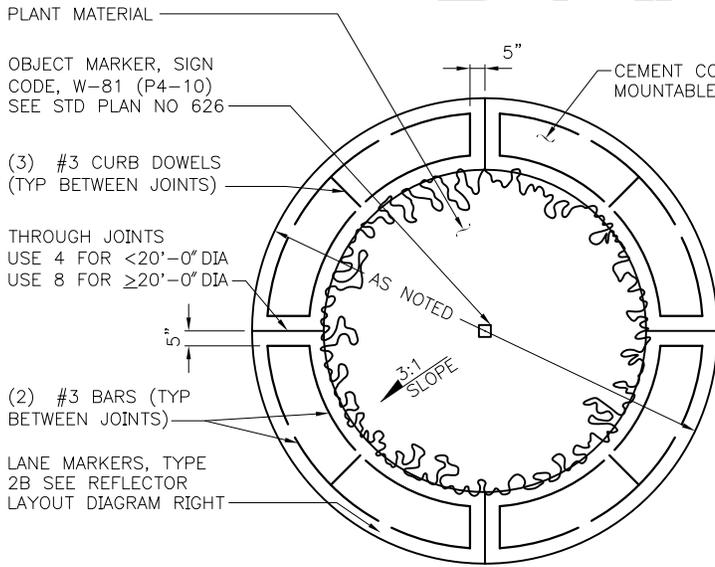


City of Seattle

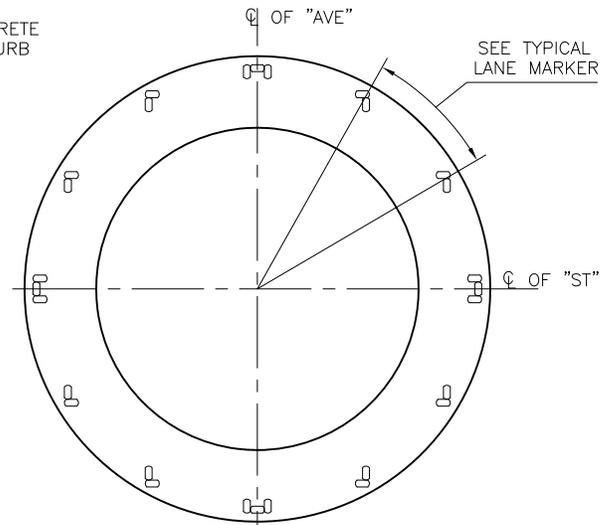
NOT TO SCALE

**FRAME & COVER CEMENT
CONCRETE REINFORCEMENT
DETAIL**

DRAFT



TYPICAL TRAFFIC CIRCLE



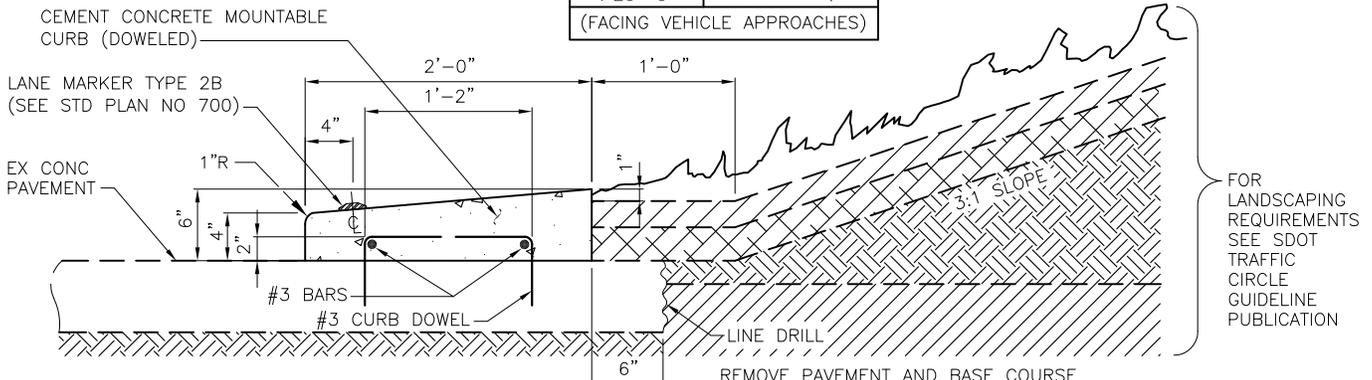
TRAFFIC CIRCLE REFLECTOR LAYOUT

this SP was removed for the 2011 & 2014 editions and is now being reinstated.

SPACING CHART

DIAMETER OF CIRCLE	DEGREE OF SPACING
≤12'-0"	EVERY 45°
<20'-0"	EVERY 30°
>20'-0"	EVERY 22 1/2°

(FACING VEHICLE APPROACHES)

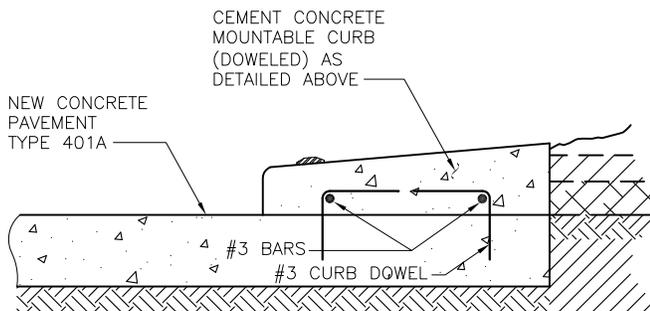


TYPICAL SECTION

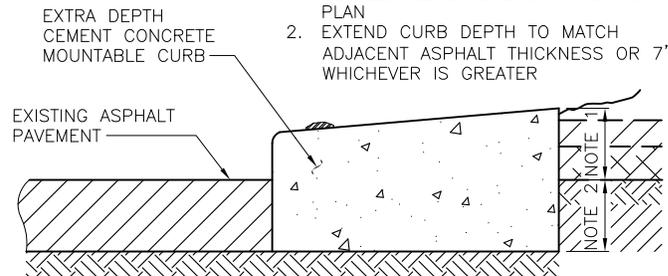
REMOVE PAVEMENT AND BASE COURSE THOROUGHLY LOOSEN SUBSOIL TO 6" DEPTH (AFTER COMPLETE REMOVAL OF ALL PAVEMENT AND BASE MATERIAL)

NOTES:

1. DIMENSIONS ABOVE PAVEMENT EXTENSION TO MATCH SECTION DETAILED ELSEWHERE ON THIS STD PLAN
2. EXTEND CURB DEPTH TO MATCH ADJACENT ASPHALT THICKNESS OR 7" WHICHEVER IS GREATER



SEE TYP SECTION ABOVE FOR DIMENSIONS



TYPICAL SECTIONS

REF STD SPEC SEC 8-02, 8-04, 8-08



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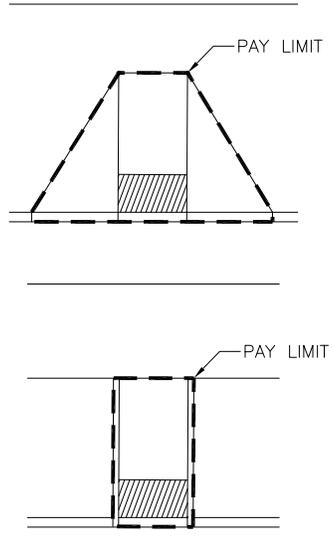
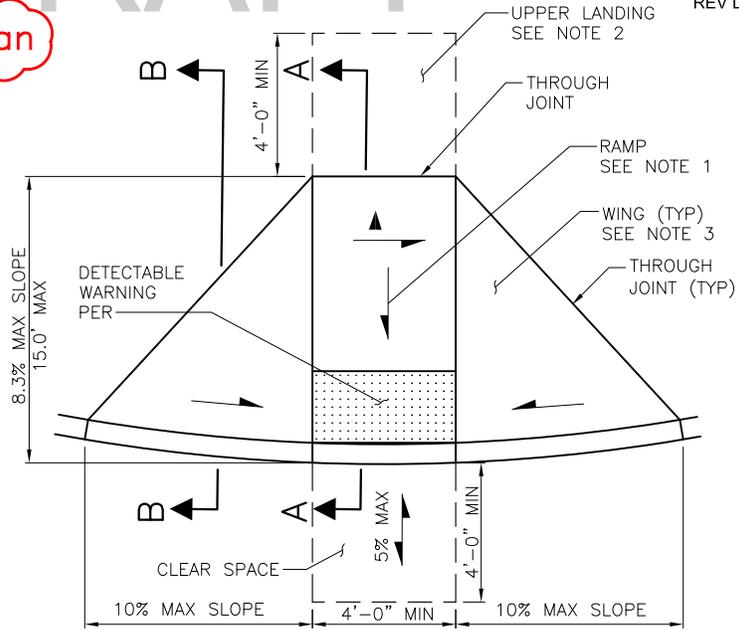
NOT TO SCALE

TRAFFIC CIRCLE DETAILS

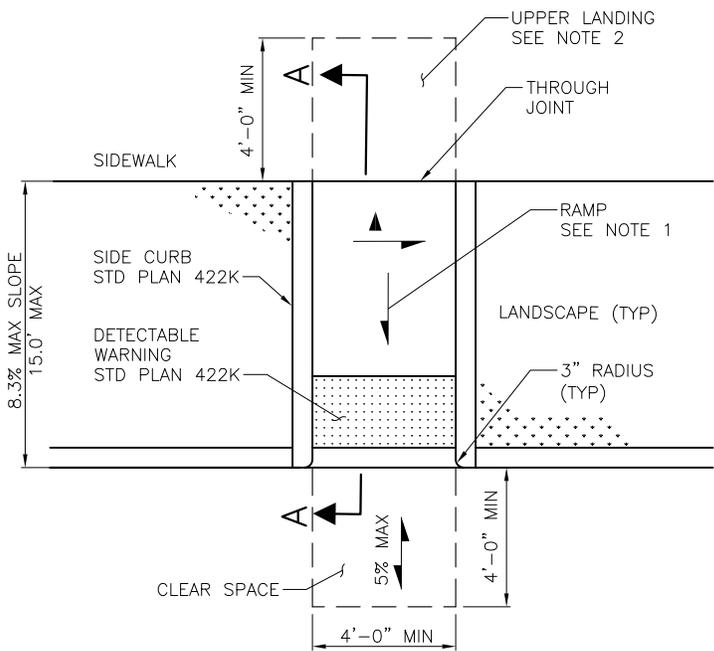
substantially revised plan

NOTES:

1. RAMP CENTERLINE SHALL BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB.
2. UPPER LANDING AT THE TOP OF THE CURB RAMP SHALL MATCH THE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". IF THE LANDING IS LIMITED AT THE BACK-OF-SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE SHALL BE 5'-0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP. SLOPE ON THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
4. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB.
5. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

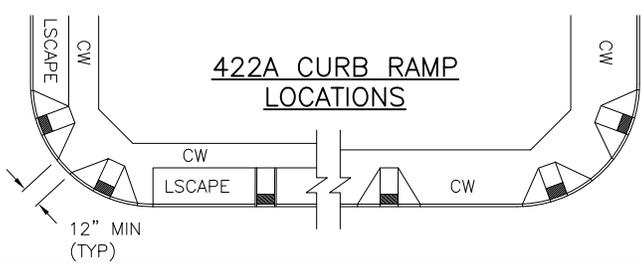


PAY LIMITS



PERPENDICULAR CURB RAMPS
(TYPE 422A)

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



City of Seattle

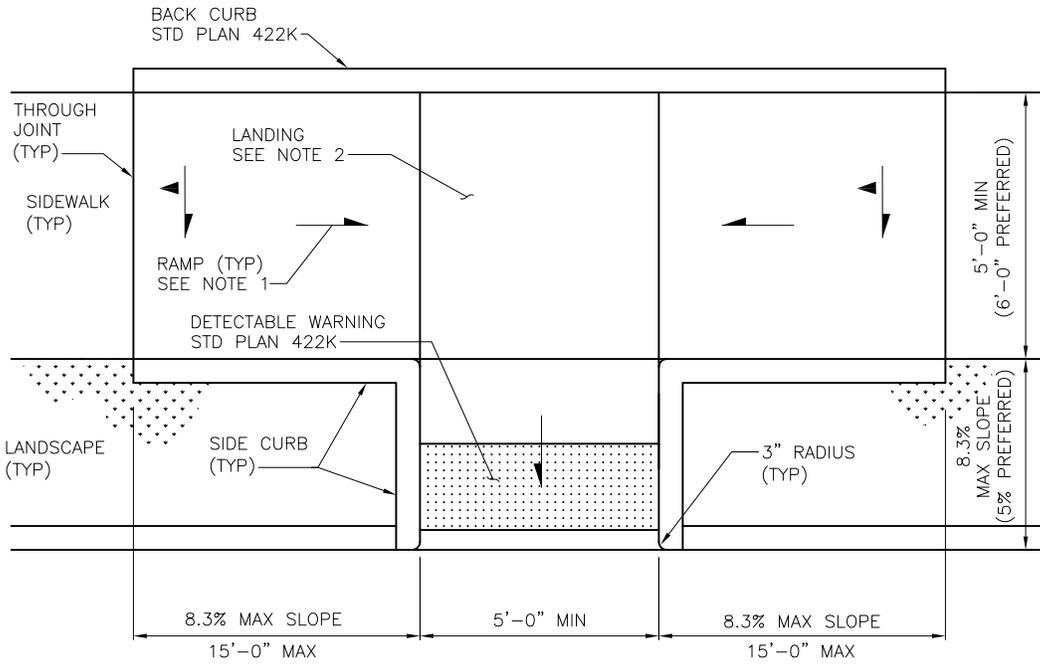
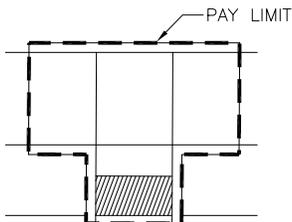
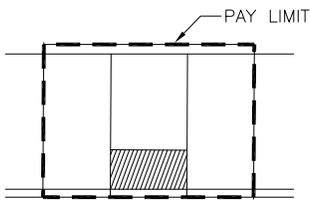
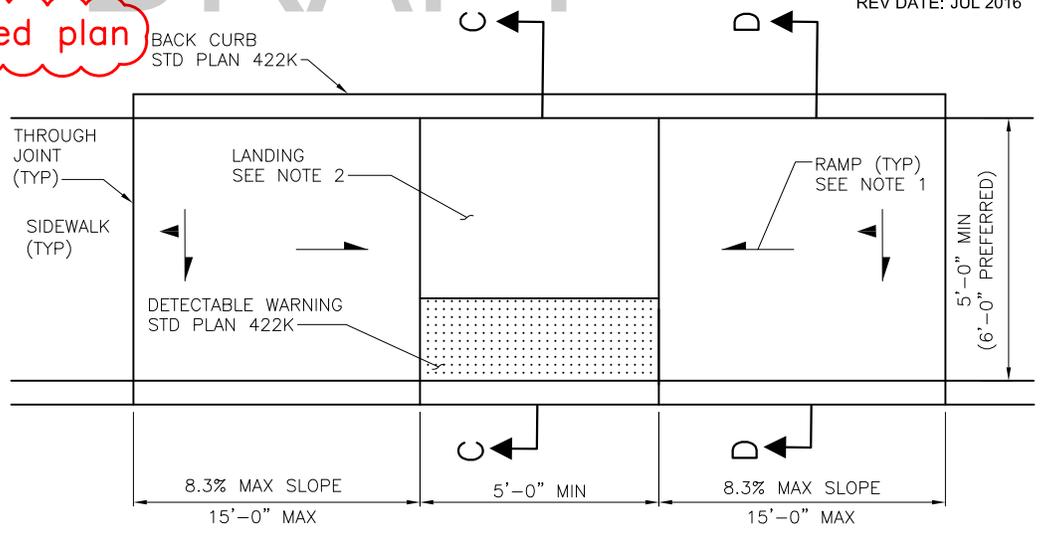
NOT TO SCALE

CURB RAMP DETAILS

substantially revised plan

NOTES:

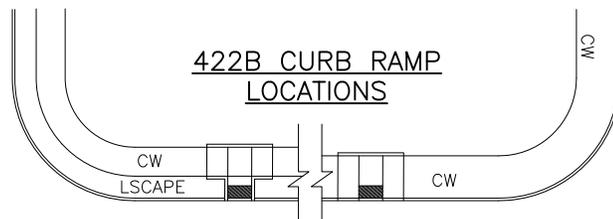
1. RAMP CENTERLINE SHALL BE PARALLEL TO THE ALIGNMENT OF THE FACE OF CURB. THE WIDTH OF THE RAMP SHALL BE 5'-0" MINIMUM BUT 6'-0" IS PREFERRED.
2. SHARED LOWER CURB RAMP LANDING SHALL HAVE A MINIMUM WIDTH OF 5'-0". SLOPE OF THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE RADIAL/PERPENDICULAR TO THE CURB.
4. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.



PARALLEL CURB RAMPS
(TYPE 422B)

PAY LIMITS

= CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



City of Seattle

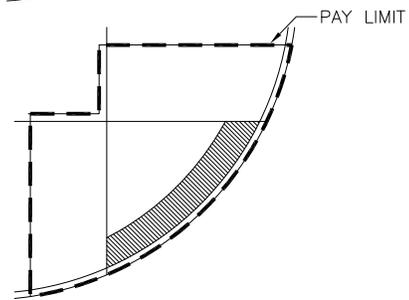
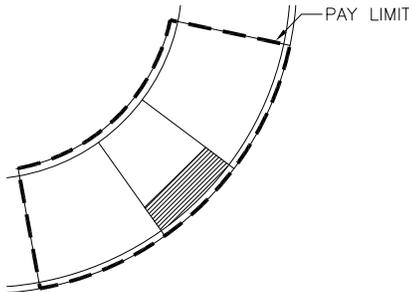
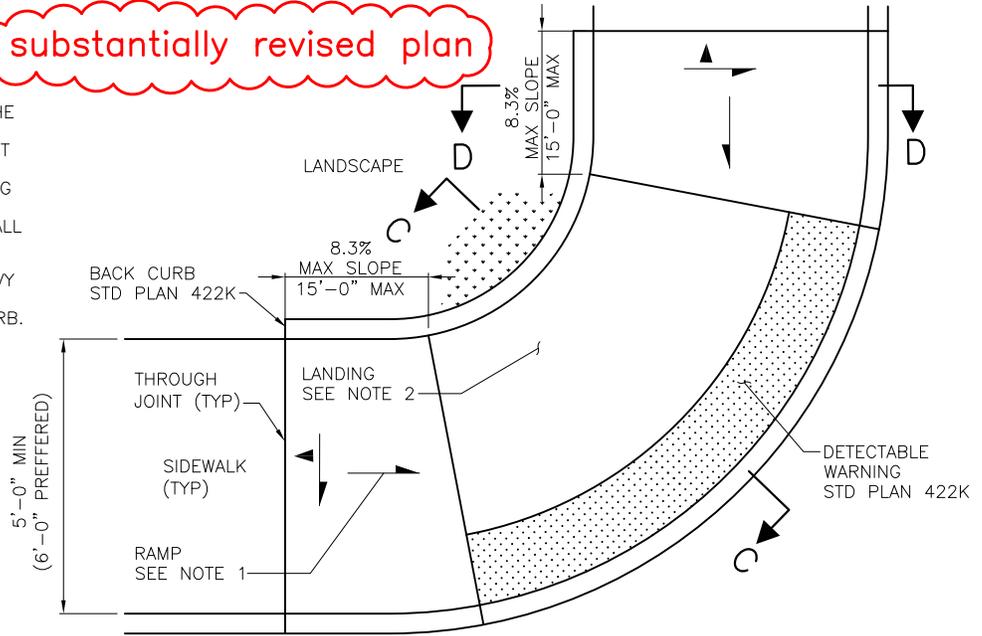
NOT TO SCALE

CURB RAMP DETAILS

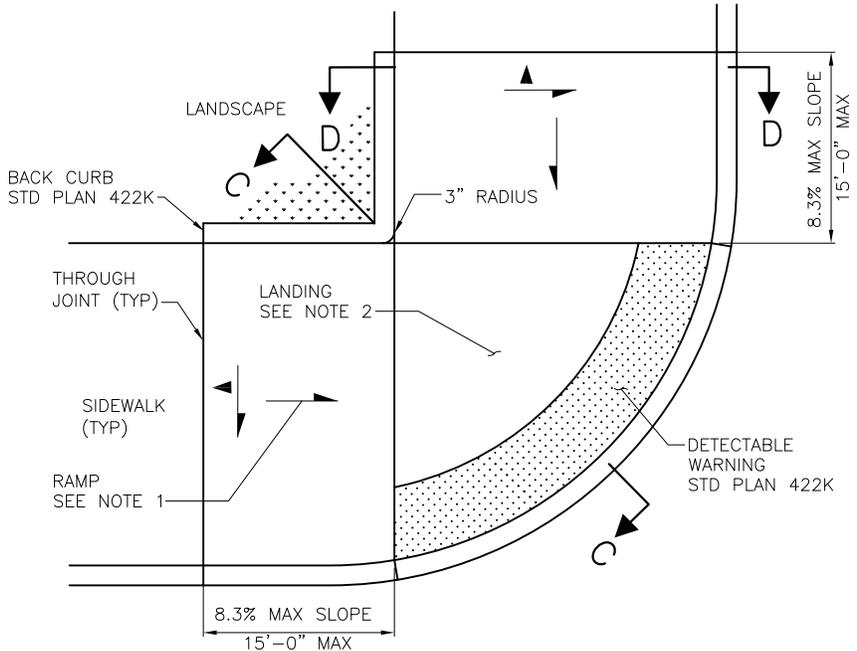
substantially revised plan

NOTES:

1. RAMP CENTERLINE SHALL BE PARALLEL TO THE ALIGNMENT OF THE FACE OF CURB. THE WIDTH OF THE RAMP SHALL BE 5'-0" MINIMUM BUT 6'-0" IS PREFERRED.
2. SHARED LOWER CURB RAMP LANDING SHALL HAVE A MINIMUM WIDTH OF 5'-0". SLOPE OF THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE RADIAL/PERPENDICULAR TO THE CURB.
4. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

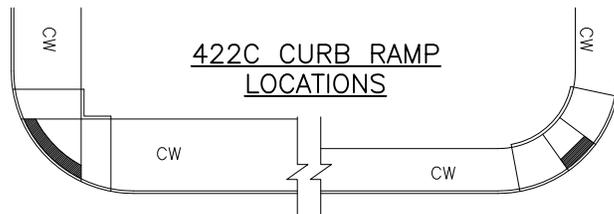


PAY LIMITS



PARALLEL CURB RAMPS (CORNER)
(TYPE 422C)

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



City of Seattle

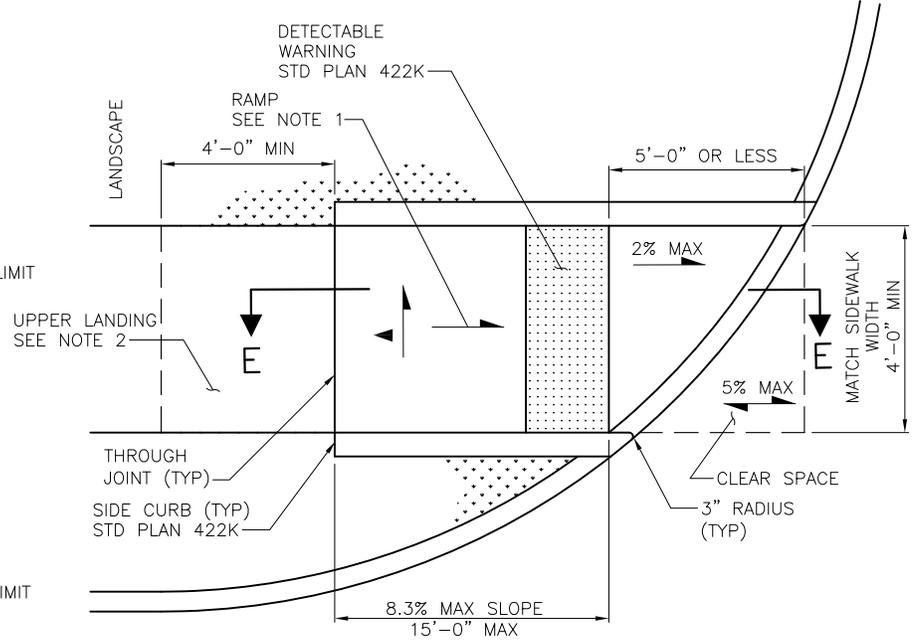
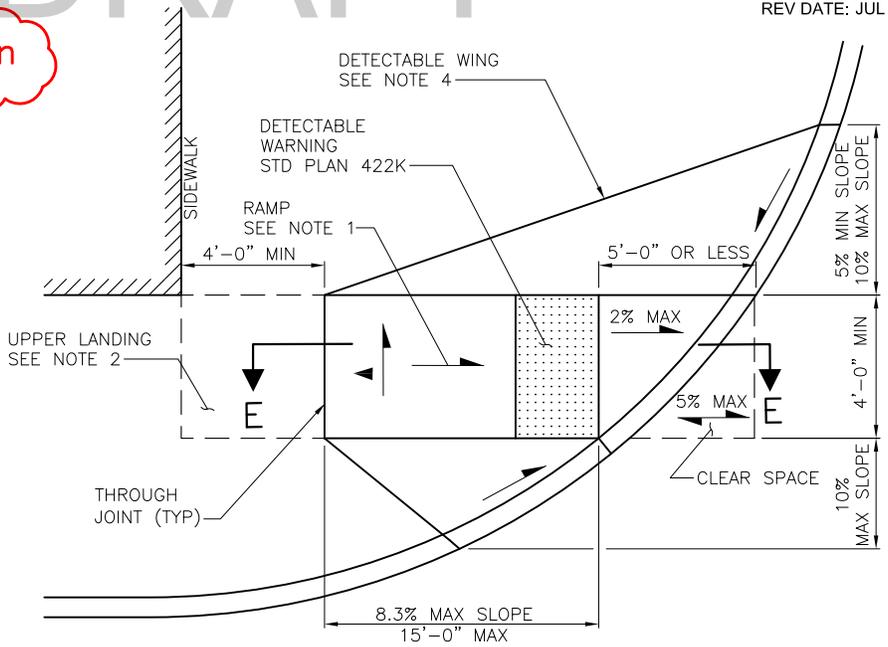
NOT TO SCALE

CURB RAMP DETAILS

new std plan

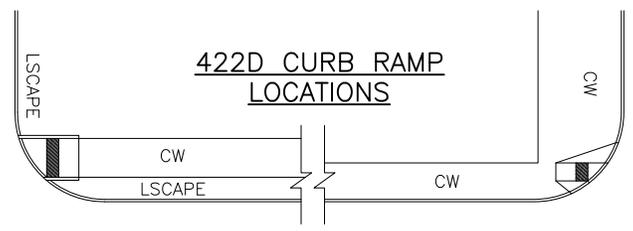
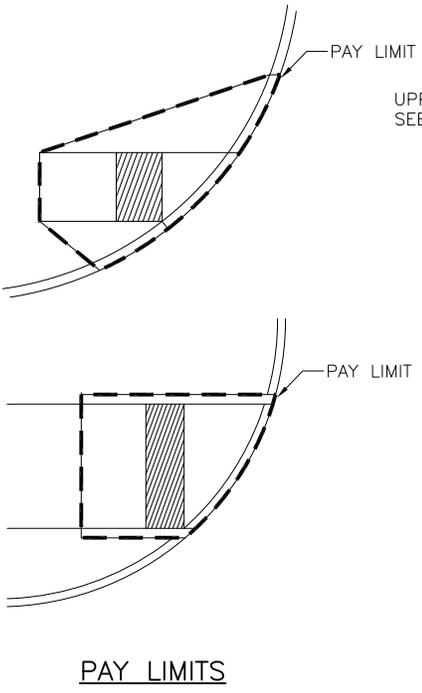
NOTES:

1. RAMP CENTERLINE SHALL BE PARALLEL TO CROSSWALK AND/OR THE SIDEWALK.
2. UPPER LANDING AT THE TOP OF THE CURB RAMP SHALL MATCH THE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". IF THE LANDING IS LIMITED AT THE BACK-OF-SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE SHALL BE 5'-0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP. SLOPE ON THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
4. WING ON THE OPEN SIDE OF THE CURB RAMP SHALL HAVE A MINIMUM SLOPE OF 5% TO ASSIST PEDESTRIANS WITH VISUAL IMPAIRMENTS WHERE THE DETECTABLE WARNING SURFACE IS OFFSET FROM THE CURB LINE.
5. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
6. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.



DIRECTIONAL CURB RAMPS
(TYPE 422D)

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



City of Seattle

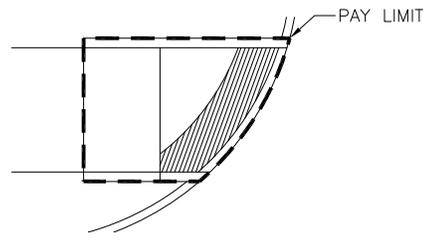
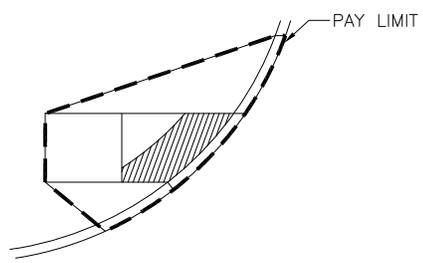
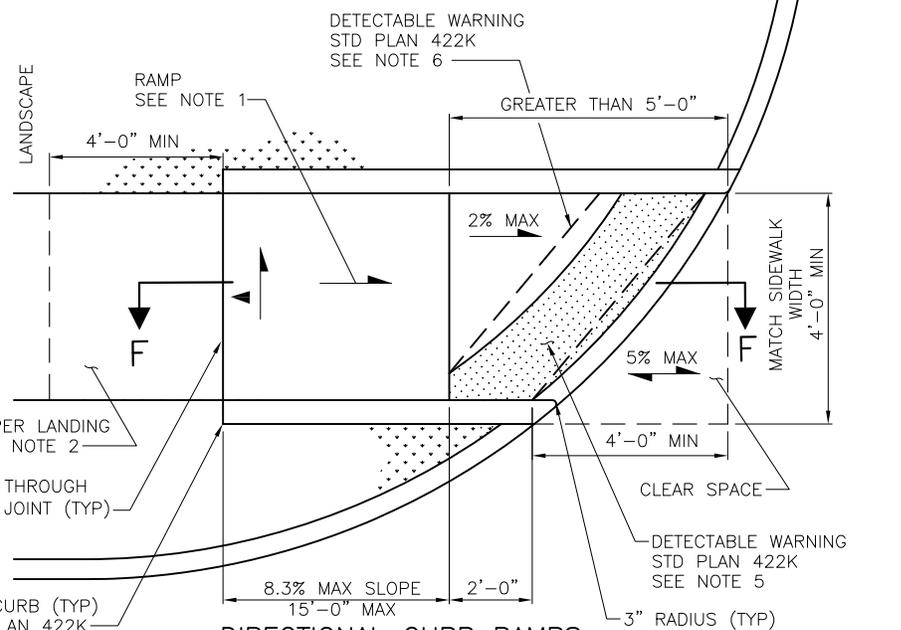
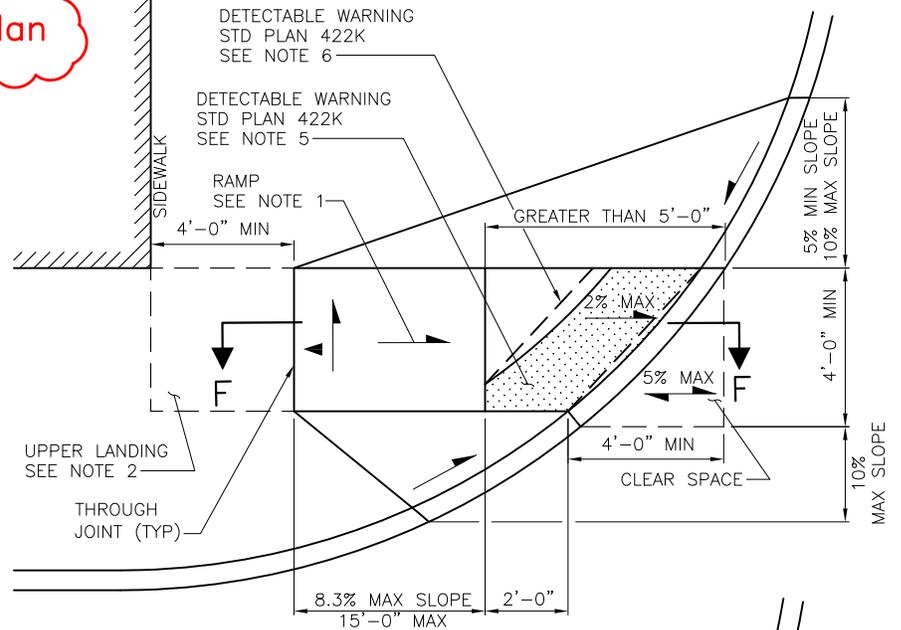
NOT TO SCALE

CURB RAMP DETAILS

new std plan

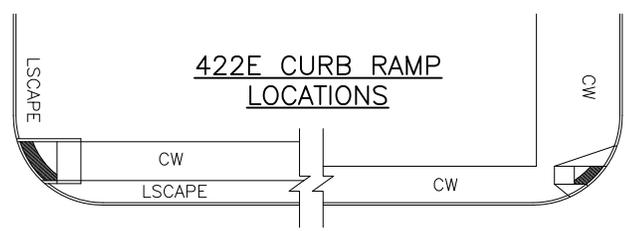
NOTES:

1. RAMP CENTERLINE SHALL BE PARALLEL TO CROSSWALK AND/OR THE SIDEWALK.
2. UPPER LANDING AT THE TOP OF THE CURB RAMP SHALL MATCH THE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". IF THE LANDING IS LIMITED AT THE BACK-OF-SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE SHALL BE 5'-0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP. SLOPE ON THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
4. WHERE THE SETBACK FROM THE BOTTOM OF THE CURB RAMP TO THE BACK OF CURB LINE EXCEEDS 5'-0", THE DETECTABLE WARNING SURFACE SHALL BE INSTALLED AT THE BACK OF CURB (NOT AT THE BOTTOM OF RAMP).
5. DIRECTIONAL CURB RAMPS WITH LARGE SETBACK FROM BACK OF CURB TO BOTTOM OF THE CURB RAMP ARE NOT PREFERRED DESIGNS BUY MAY BE USED IF NECESSARY DUE TO EXISTING SITE CONSTRAINTS. THIS DESIGN WILL LIKELY REQUIRE THE CUTTING OR ALTERING A DETECTABLE WARNING SURFACE TO FIT.
6. STRAIGHT SECTIONS OF DETECTABLE WARNING SURFACE IS PERMITTED AS AN ALTERNATE. IF USED, THERE SHALL BE 2" MAXIMUM FROM THE DETECTABLE WARNING SURFACE TO THE BACK OF CURB AT ANY POINT.
7. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
8. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.



PAY LIMITS

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



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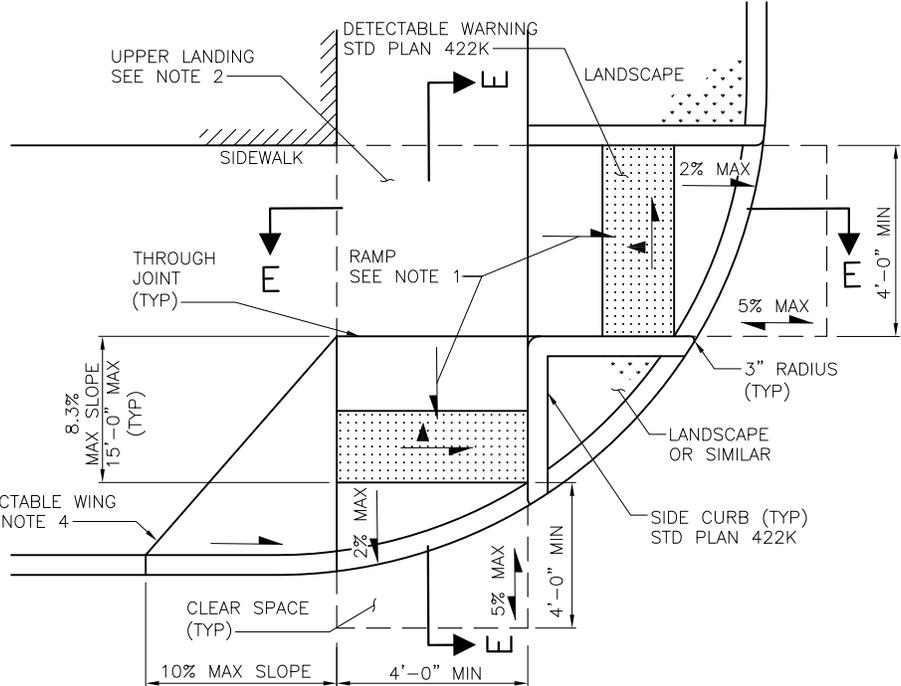
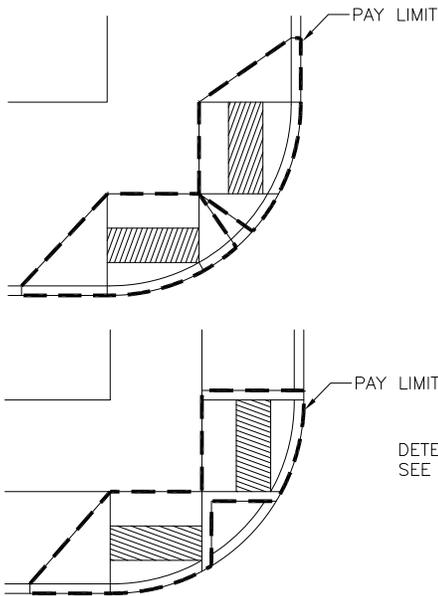
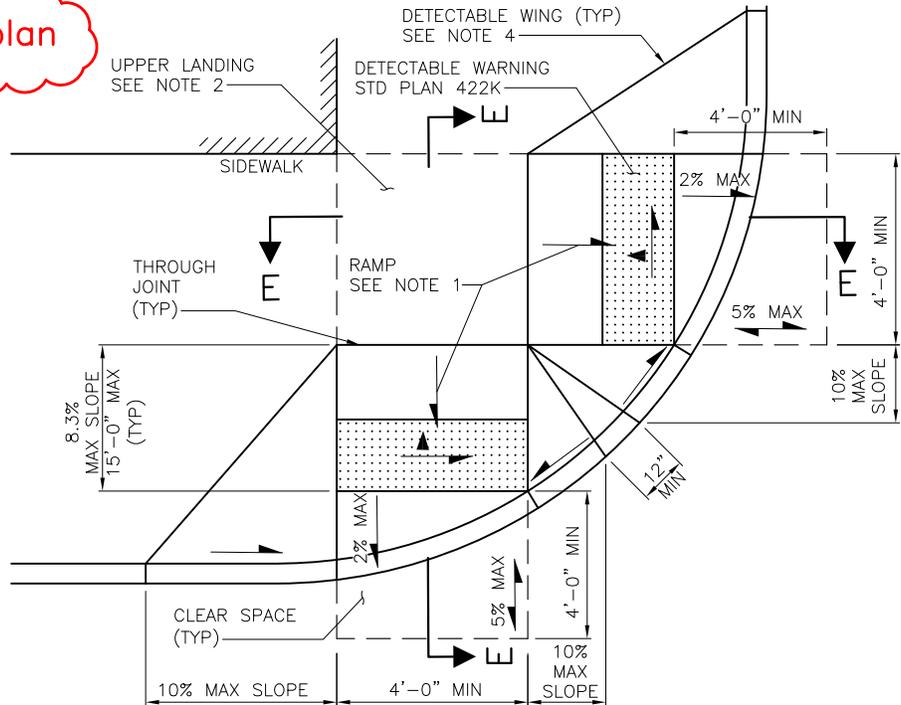
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CURB RAMP DETAILS

new std plan

NOTES:

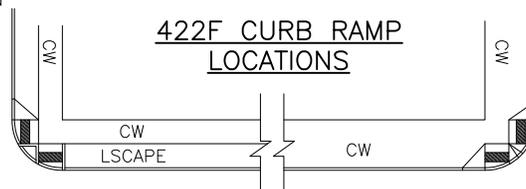
1. RAMP CENTERLINE SHALL BE PARALLEL TO CROSSWALK AND/OR THE SIDEWALK.
2. UPPER LANDING AT THE TOP OF THE CURB RAMP SHALL MATCH THE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". IF THE LANDING IS LIMITED AT THE BACK-OF-SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE SHALL BE 5'-0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP. SLOPE ON THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
4. WING ON THE OPEN SIDE OF THE CURB RAMP SHALL HAVE A MINIMUM SLOPE OF 5% TO ASSIST PEDESTRIANS WITH VISUAL IMPAIRMENTS WHERE THE DETECTABLE WARNING SURFACE IS OFFSET FROM THE CURB LINE.
5. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
6. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.



PAY LIMITS

DIRECTIONAL CURB RAMPS W/ SHARED LANDING
(TYPE 422F)

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



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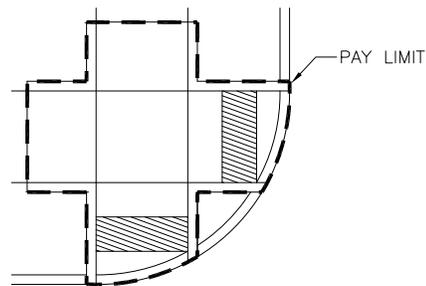
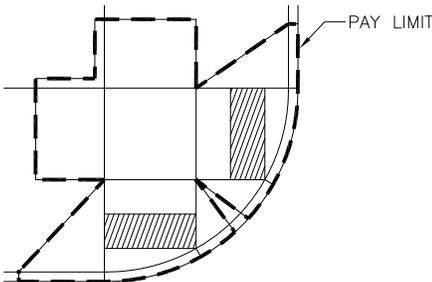
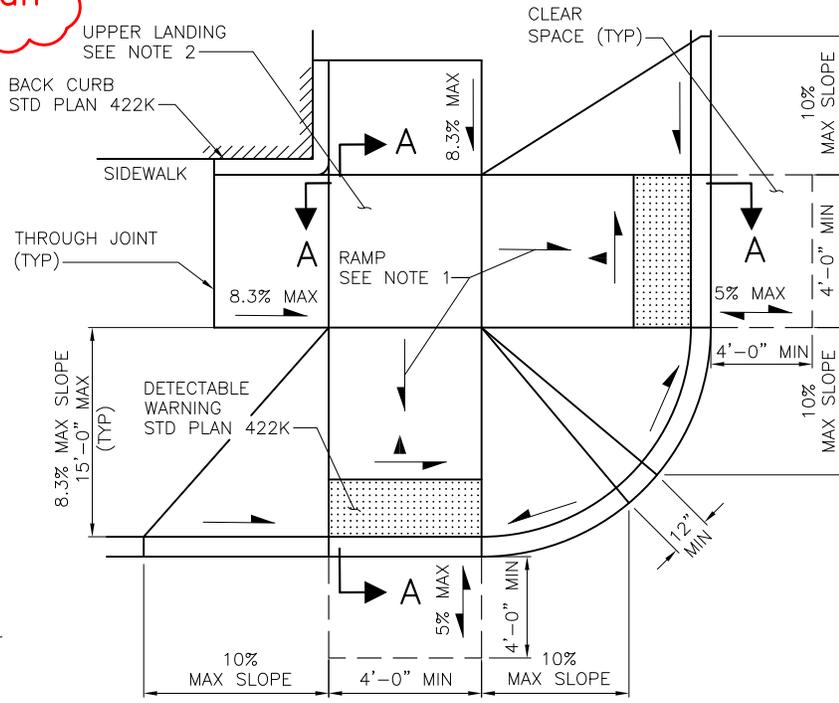
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CURB RAMP DETAILS

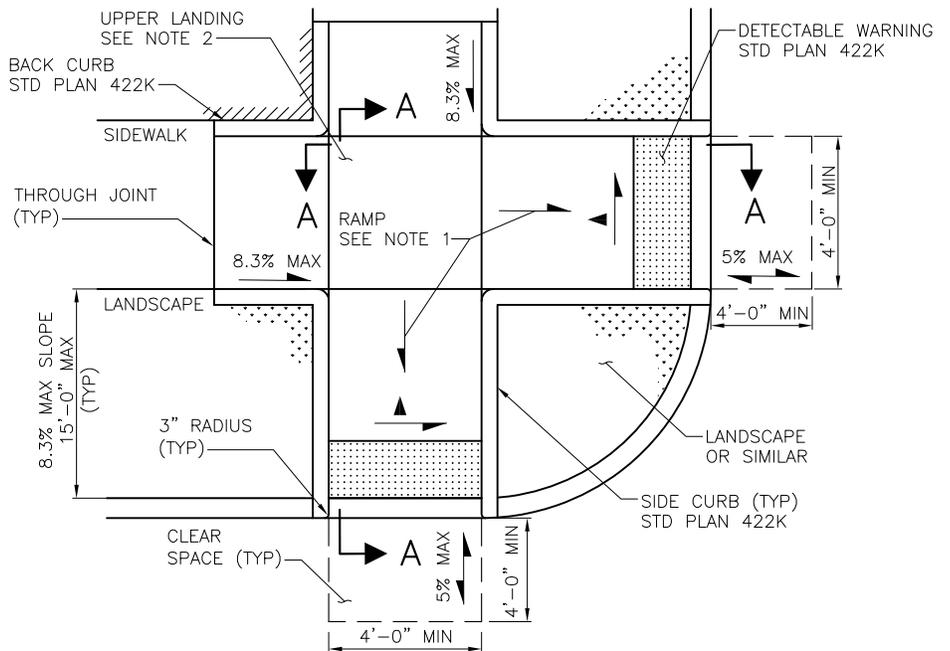
new std plan

NOTES:

1. RAMP CENTERLINE SHALL BE PARALLEL TO CROSSWALK AND/OR THE SIDEWALK.
2. UPPER LANDING AT THE TOP OF THE CURB RAMP SHALL MATCH THE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". IF THE LANDING IS LIMITED AT THE BACK-OF-SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE SHALL BE 5'-0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP. SLOPE ON THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
3. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
4. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB.
5. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

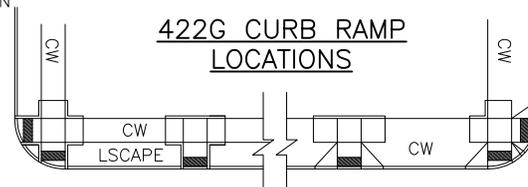


PAY LIMITS



PARALLEL AND PERPENDICULAR COMBINATION CURB RAMPS W/ SHARED LANDING (TYPE 422G)

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



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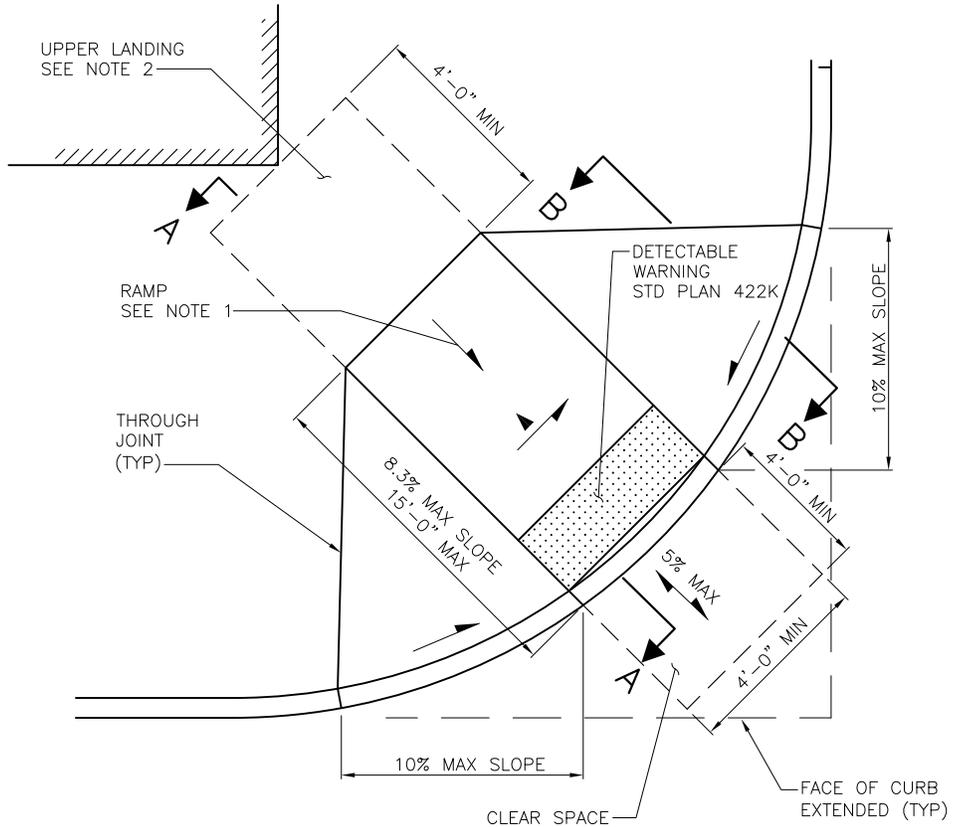
CURB RAMP DETAILS

DRAFT

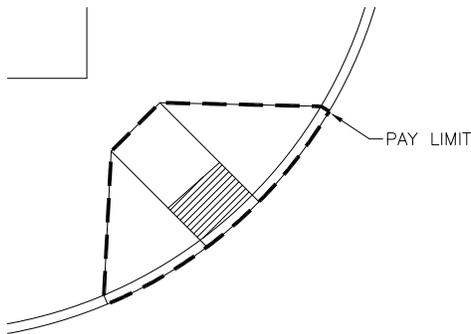
NOTES:

1. SHARED DIAGONAL PERPENDICULAR RAMPS SHALL NOT BE INSTALLED UNLESS ALL OTHER DESIGN OPTIONS ARE UNABLE TO BE CONSTRUCTED DUE TO EXISTING SITE CONSTRAINTS.
2. RAMP CENTERLINE SHALL BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB.
3. UPPER LANDING AT THE TOP OF THE CURB RAMP SHALL MATCH THE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". IF THE LANDING IS LIMITED AT THE BACK-OF-SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE SHALL BE 5'-0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP. SLOPE ON THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
4. CLEAR SPACE AT THE BOTTOM OF THE RAMP SHALL BE 4'-0" MINIMUM IN WIDTH AND SHALL EXTEND A MINIMUM OF 4'-0" BEYOND THE RAMP LOWER GRADE BREAK. THE CLEAR SPACE SHALL FALL WHOLLY WITHIN THE LEGAL CROSSWALK, MARKED OR UNMARKED. THE CLEAR SPACE SHALL FIT BEHIND LINES EXTENDING FROM THE FACE OF CURB RUNNING PARALLEL TO EACH ROADWAY. THERE IS NO ALLOWABLE EXEMPTION FOR MINIMUM CLEAR SPACE REQUIREMENTS AT SHARED DIAGONAL PERPENDICULAR CURB RAMPS.
5. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
6. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB.
7. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

new std plan

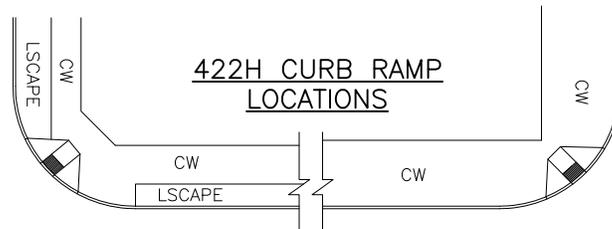


SHARED DIAGONAL PERPENDICULAR CURB RAMP
(TYPE 422H)



PAY LIMITS

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



REF STD SPEC SEC 8-14



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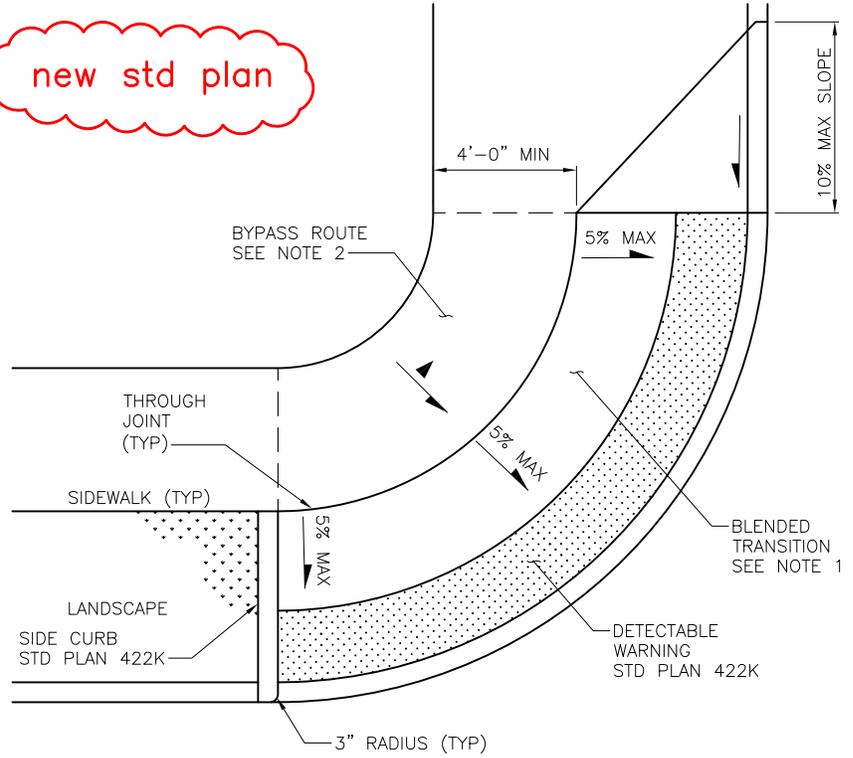
CURB RAMP DETAILS

DRAFT

NOTES:

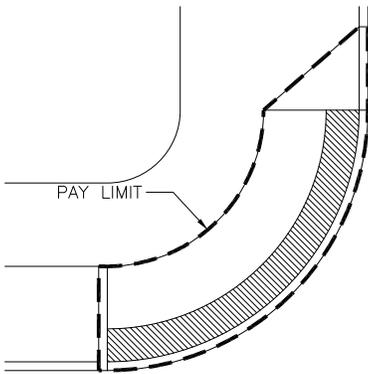
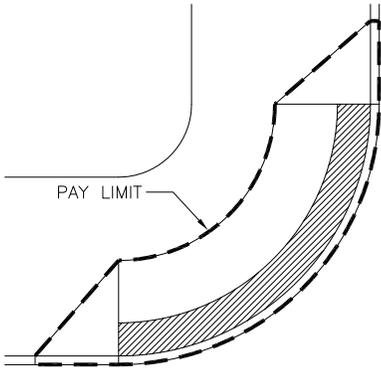
1. THE SIDEWALK SHALL TRANSITION DOWN TO THE ROADWAY WITH A MAXIMUM RUNNING SLOPE OF 5%. THE CROSS SLOPE ON THE TRANSITION SHALL NOT EXCEED 2% AT ANY POINT.
2. A MINIMUM BYPASS ROUTE SHALL BE PROVIDED AT THE TOP OF THE BLENDED TRANSITION WITH A MINIMUM WIDTH OF 4'-0". THE CROSS SLOPE OF THE BYPASS ROUTE SHALL NOT EXCEED 2% IN ANY DIRECTION.
3. WINGS SHALL HAVE A MAXIMUM SLOPE OF 10%. WINGS SHALL HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
4. BLENDED TRANSITION SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE RADIAL/PERPENDICULAR TO THE CURB.
5. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

new std plan

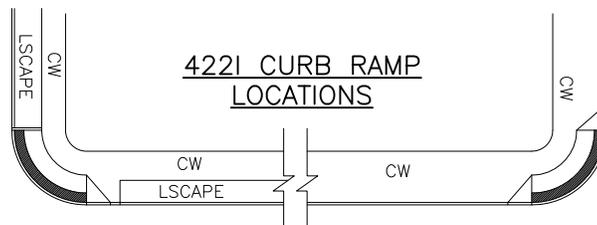


BLENDED TRANSITION
(TYPE 422i)

▲ = CROSS-SLOPE BETWEEN 0.5% & 2%



PAY LIMITS



REF STD SPEC SEC 8-14



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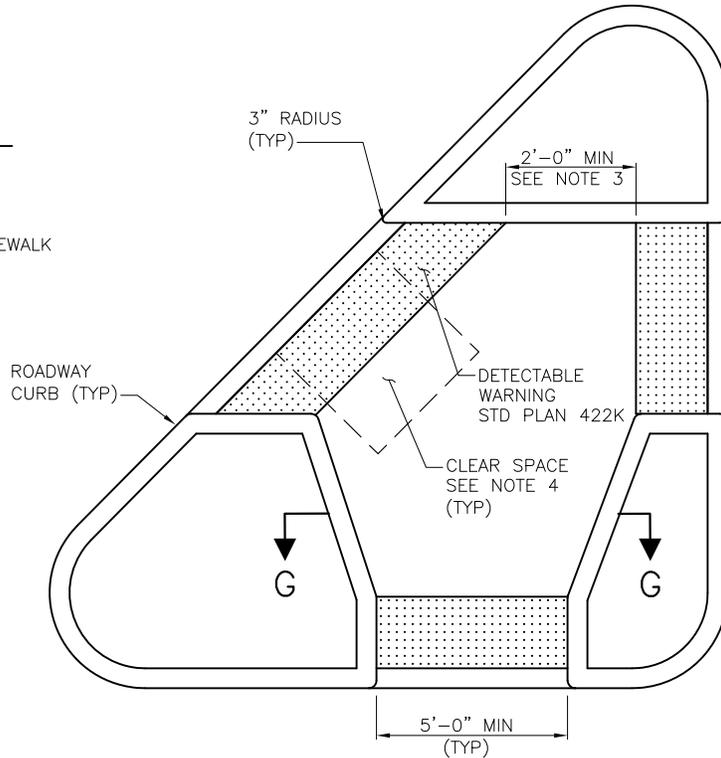
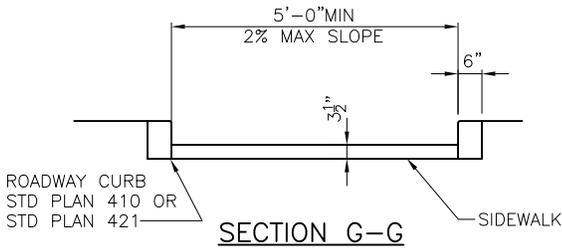
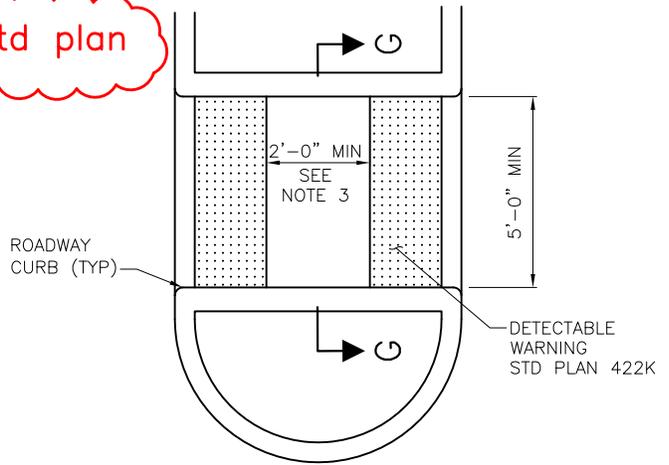
CURB RAMP DETAILS

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NOTES:

1. SIZE, SHAPE, AND/OR DIMENSIONS OF CHANNELIZING ISLANDS OR PEDESTRIAN REFUGE ISLANDS MAY VARY. DETAILS SHOWN ARE INTENDED TO SHOW MINIMUM REQUIRED CLEARANCES AND DETECTABLE WARNING SURFACE PLACEMENT LOCATIONS.
2. ACCESS THROUGH CHANNELIZING ISLANDS OR PEDESTRIAN REFUGE ISLANDS MAY BE CUT-THROUGH OR ACCESS MAY BE PROVIDED USING STANDARD CURB RAMP DETAILS.
3. AT PEDESTRIAN REFUGE ISLANDS, DETECTABLE WARNING IS NOT TO BE INSTALLED IF THE REFUGE AREA IS LESS THAN 6'-0" IN DEPTH (IN THE DIRECTION OF TRAVEL).
4. PROVIDE A MINIMUM 4'-0" WIDTH x 4'-0" DEPTH CLEAR SPACE FOR ACCESS FROM THE CHANNELIZING ISLAND OR PEDESTRIAN REFUGE ISLAND FOR EACH CROSSWALK.

new std plan



ISLAND CUT-THROUGHS
(TYPE 422J)

REF STD SPEC SEC 8-14



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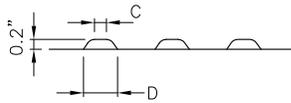
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CURB RAMP DETAILS

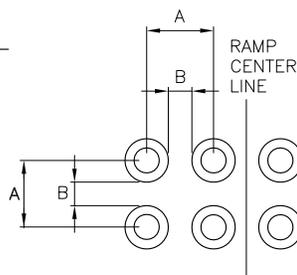
CURB RAMP GENERAL NOTES:

- TWO CURB RAMPS SHALL BE INSTALLED AT EACH CORNER UNLESS OTHERWISE DIRECTED BY ENGINEER. SHARED DIAGONAL PERPENDICULAR RAMPS SHALL NOT BE INSTALLED UNLESS ALL OTHER DESIGN OPTIONS ARE UNABLE TO BE CONSTRUCTED DUE TO EXISTING SITE CONSTRAINTS.
- CURB RAMPS SHALL BE AS CLOSELY ALIGNED WITH THE SIDEWALK AND THE PEDESTRIAN STREET CROSSING SERVED AS POSSIBLE.
- CURB RAMP SHALL BE CONSTRUCTED WITH COMPANION RAMP ON OPPOSITE SIDE OF THE ROADWAY WHERE NO RAMP IS PROVIDED UNLESS OTHERWISE DIRECTED BY ENGINEER.
- RAMPS SHALL TYPICALLY HAVE A MAXIMUM RUNNING SLOPE OF 8.3% AND A MINIMUM WIDTH OF 4'-0" UNLESS OTHERWISE DIRECTED BY ENGINEER. THE CROSS SLOPE OF RAMPS SHALL BE MAXIMUM OF 2%. CURB RAMPS ARE NOT REQUIRED TO EXCEED A LENGTH OF 15 FEET UNLESS OTHERWISE DIRECTED BY ENGINEER.*
- GRADE BREAKS AT THE TOP AND THE BOTTOM OF CURB RAMP RUNS MUST BE PERPENDICULAR TO THE PATH OF TRAVEL. CURB RAMP RUNS ARE DEFINED BY RUNNING SLOPES THAT EXCEED 5% BUT ARE NO MORE THAN 8.3%. SURFACES ABUTTING AT CURB RAMP GRADE BREAKS SHALL BE FLUSH.
- AREAS ADJACENT TO CURB RAMPS OR CURB RAMP LANDINGS USABLE BY PEDESTRIANS SHALL COMPLY WITH STANDARD PLAN SIDEWALK SLOPE LIMITS OR A CURB RAMP WING MUST BE PROVIDED AS SHOWN IN THE APPLICABLE CURB RAMP DETAILS. THE INSTALLATION OF CURBED EDGES ARE NOT REQUIRED BUT MAY BE USED AT THE SIDES OR BACKS OF CURB RAMPS OR CURB RAMP LANDING WHERE THE ADJACENT SURFACE IS LANDSCAPED OR OTHERWISE NOT USABLE BY PEDESTRIANS.
- THE COUNTER SLOPE OF THE GUTTER OR THE STREET AT THE BOTTOM OF CURB RAMP RUNS SHALL BE 5% MAXIMUM. IF TURNING OR CHANGE OF ORIENTATION IS REQUIRED WITHIN THE PEDESTRIAN CROSSING AT THE BOTTOM OF CURB RAMP RUNS, THE SLOPE SHALL BE 2% MAXIMUM IN ANY DIRECTION FOR A MINIMUM 4'-0" WIDTH x 4'-0" DEPTH MEASURED FROM THE RAMP BOTTOM GRADE BREAK.
- CURB RAMPS WITH RAMP RUNS THAT TERMINATE AT THE ENTRANCE TO THE PEDESTRIAN STREET CROSSING SHALL HAVE A CLEAR SPACE AT THE BOTTOM OF THE RAMP 4'-0" MINIMUM IN WIDTH AND SHALL EXTEND A MINIMUM 4'-0" BEYOND THE RAMP LOWER GRADE BREAK. THE CLEAR SPACE SHALL FALL WHOLLY WITHIN THE LEGAL CROSSWALK, MARKED OR UNMARKED.
- DETECTABLE WARNING SHALL BE PROVIDED AT CURB RAMPS AND AT LOCATIONS WHERE THE SIDEWALK AND ROADWAY ARE FLUSH. THE DETECTABLE WARNING SURFACE SHALL HAVE A TRUNCATED DOME PATTERN AS SHOWN, WITH A MINIMUM DEPTH OF 2'-0", AND SHALL BE PLACED AT THE BACK OF CURB BUT NO MORE THAN 8" FROM THE FACE OF CURB FOR MONOLITHIC CURBS OR ATYPICAL CURB WIDTHS. DETECTABLE WARNING SHALL MATCH THE WIDTH OF THE RAMP RUN OR THE OPENING WHERE THE SIDEWALK AND ROADWAY ARE FLUSH. THE TRUNCATED DOMES ON THE DETECTABLE WARNING SURFACE SHOULD ALIGN WITH THE CURB RAMP RUN OR THE DIRECTION OF TRAVEL. DOMES MAY BE ON A RADIAL GRID PATTERN WHERE THE DETECTABLE WARNING SURFACE IS PLACED AT CURB RADII.
- DETECTABLE WARNING COLOR SHALL BE "FEDERAL SAFETY YELLOW", UNLESS OTHERWISE DIRECTED BY ENGINEER.
- DETECTABLE WARNING SURFACES SHOULD GENERALLY NOT BE CUT OR ALTERED TO FIT UNLESS THERE IS NO ALTERNATIVE AVAILABLE. IF REQUIRED, CUT OR ALTER THE DETECTABLE WARNING SURFACE PER THE MANUFACTURER'S DIRECTIONS. DETECTABLE WARNING SURFACES PLACED AT CURB RADII SHALL MATCH THE CURB RADII WITHOUT GAPS OR INCONSISTENCIES IN PLACEMENT.
- AVOID LOCATED HANDHOLES, UTILITY CASTINGS, OR ANY OTHER OBSTRUCTIONS IN THE CURB RAMP RUN(S) OR LANDING(S). IF NECESSARY DUE TO EXISTING CONSTRAINTS, HANDHOLES, UTILITY CASTINGS, OR OTHER OBSTRUCTIONS MAY BE LOCATED WITHIN A RAMP RUN, LANDING, OR TURNING SPACE BUT MUST ADHERE TO SURFACE REQUIREMENTS. LEVEL CHANGES BETWEEN SURFACES MUST NOT EXCEED 1/4" OR 1/2" WITH A 1:2 BEVEL. GAPS BETWEEN SURFACES OR GRATINGS MAY NOT EXCEED 1/2". SURFACES MUST BE FIRM, STABLE, AND SLIP RESISTANT.
- HANDHOLES, UTILITY CASTINGS, OR OTHER OBSTRUCTIONS SHALL NOT REDUCE THE REQUIRED DEPTH OF DETECTABLE WARNING.
- POLES, HYDRANTS AND OTHER ABOVE GROUND OBSTRUCTIONS SHALL HAVE A MINIMUM LATERAL CLEARANCE OF 1'-0" FROM THE UPPER LANDING AND RAMP SURFACE.
- ALL CHANGES IN LEVEL ACROSS JOINTS SHALL BE FLUSH. ANY DIFFERENCE IN ELEVATION OF 3/16 INCH OR GREATER SHALL BE REPAIRED OR REPLACED.
- CURB RAMPS SHALL BE DESIGNED AND CONSTRUCTED SO THAT WATER WILL NOT ACCUMULATE ON RAMP SURFACES. GUTTER FLOW LINE SHALL BE SURVEYED BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE PONDING OF WATER SHALL NOT OCCUR AT THE BOTTOM OF CURB RAMPS OR AT CURB RAMP LOWER LANDINGS.
- ALL SLOPE GRADES SHALL BE MEASURED OFF THE HORIZON-LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE DESIGNER / CONTRACTOR SHALL MAKE MINIMUM ADJUSTMENTS TO THE GRADES SHOWN TO MEET EXISTING SITE CONDITIONS; ADJUSTMENTS ARE SUBJECT TO ENGINEER APPROVAL.

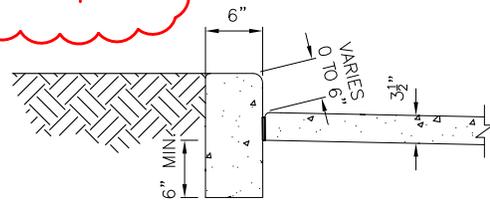
* IT IS GENERALLY PREFERRED THAT CURB RAMPS, CURB RAMP LANDINGS, AND ASSOCIATED FEATURES NOT BE DESIGNED TO THE MINIMUM OR MAXIMUM ALLOWABLE DIMENSION AND/OR SLOPE TO ALLOW FOR A LIMITED MARGIN OF ERROR DURING CONSTRUCTION.



	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	50% TO 65% OF D	
D	0.9"	1.4"

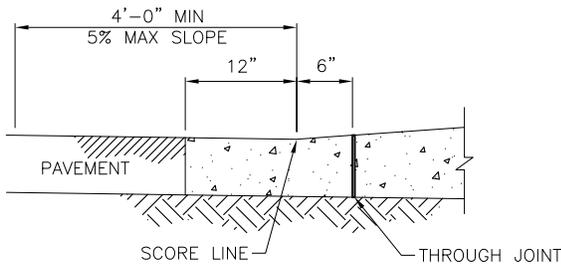


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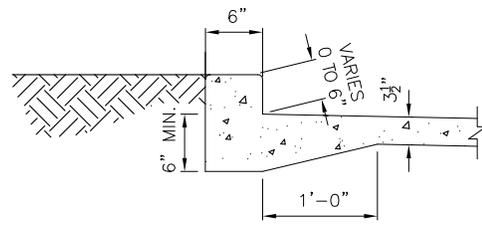


SIDE CURB DETAIL

DETECTABLE WARNING TRUNCATED DOMES PATTERN



DEPRESSED CURB AND GUTTER DETAIL



BACK CURB DETAIL

REF STD SPEC SEC 8-14



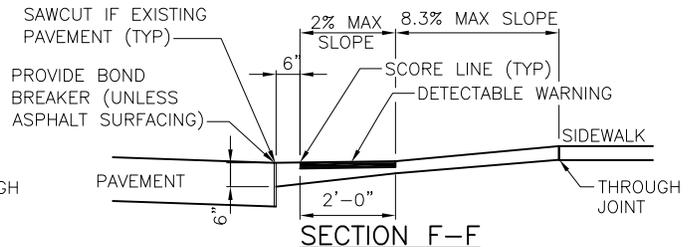
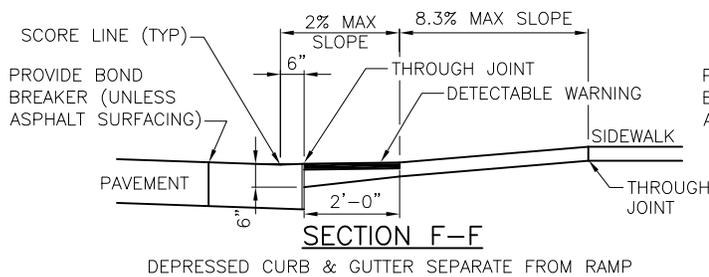
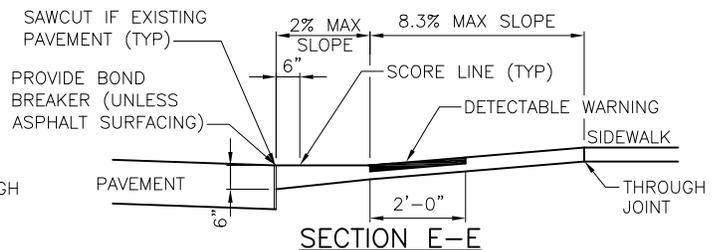
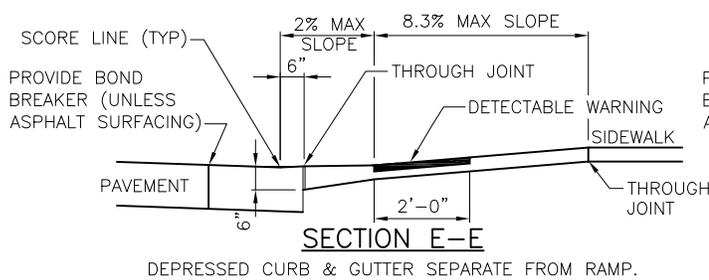
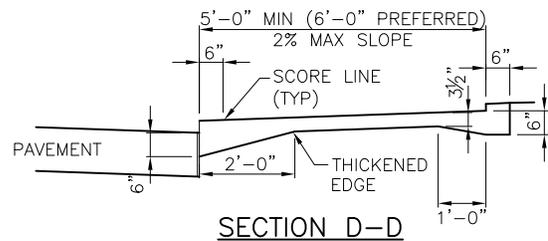
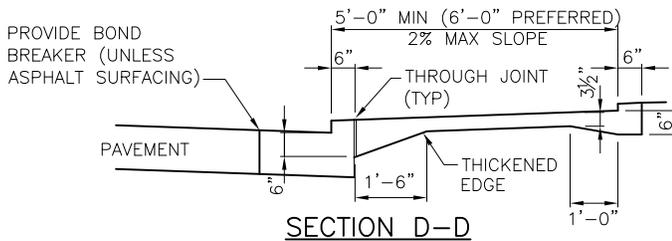
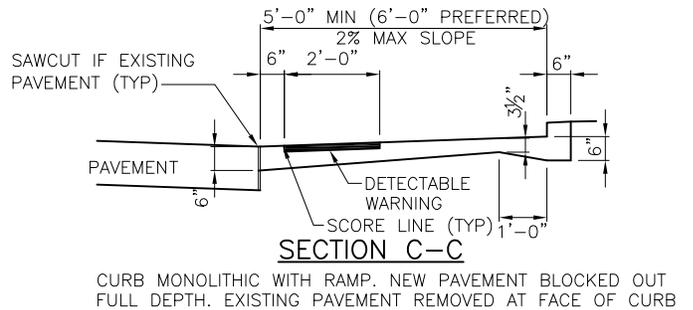
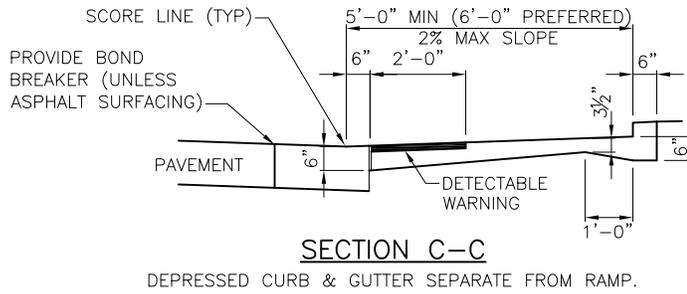
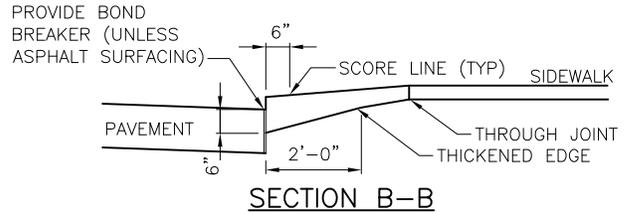
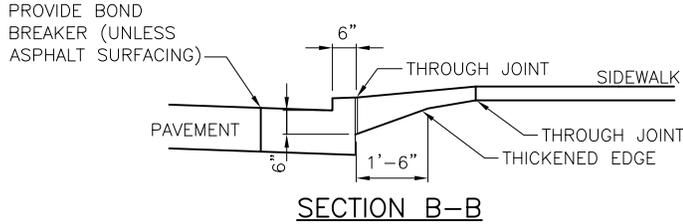
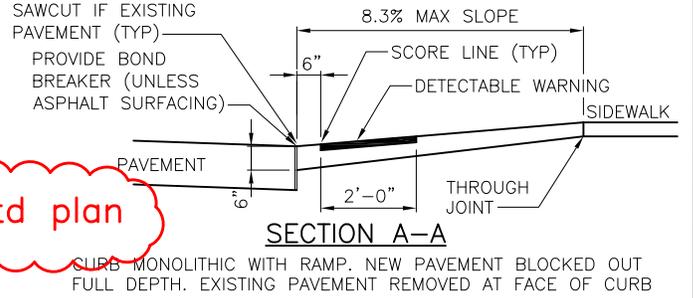
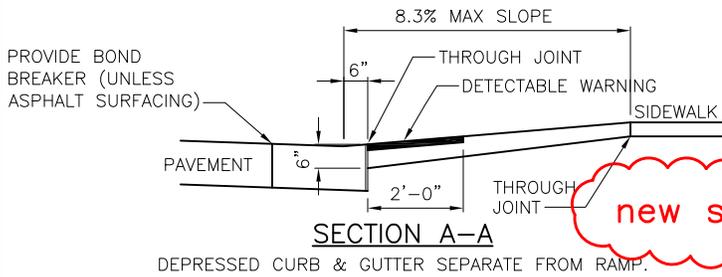
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NOT TO SCALE

CURB RAMP DETAILS

DRAFT

new std plan



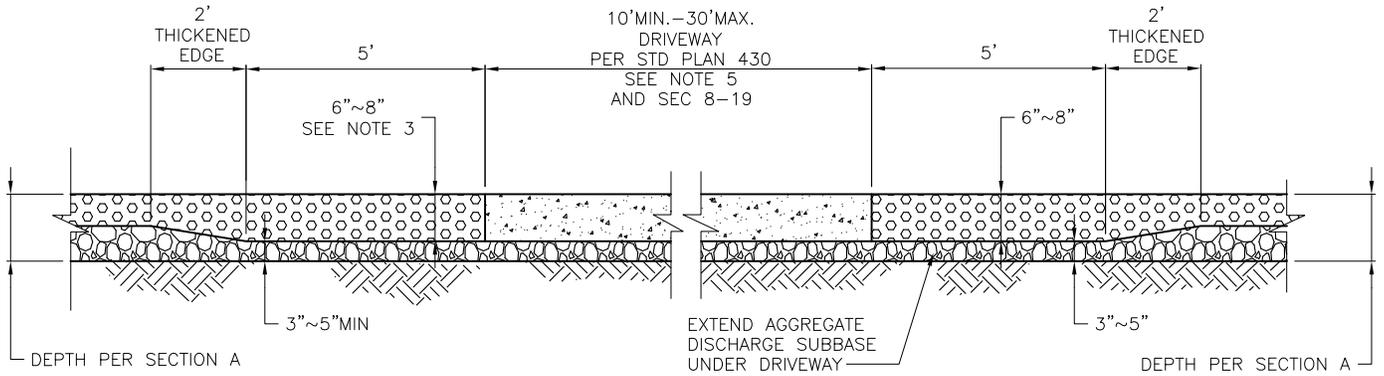
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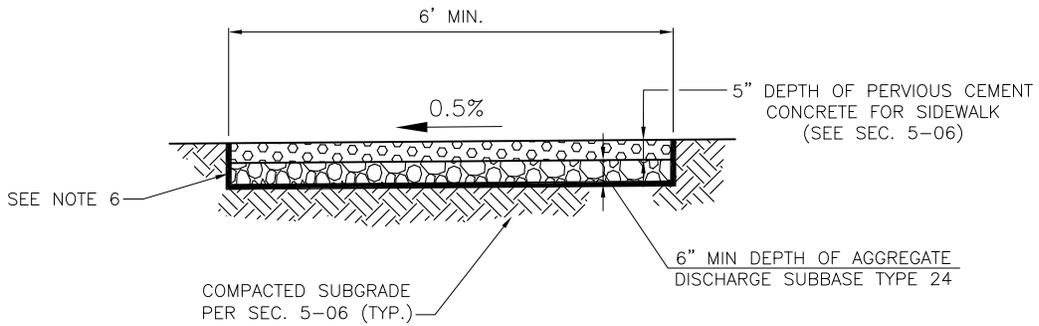
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CURB RAMP SECTIONS



PERVIOUS CONC CEM SIDEWALK DEPTH TRANSITION AT DRIVEWAYS PROFILE VIEW

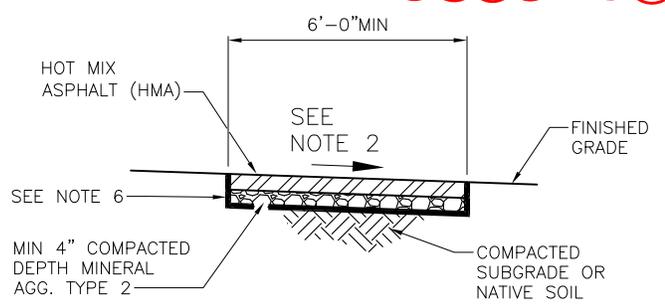


PERVIOUS CONC SECTION A

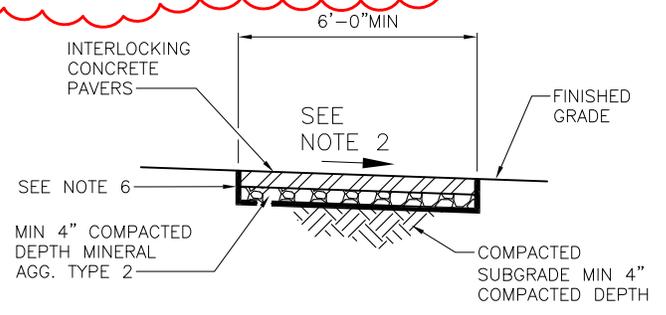
NOTES:

1. DEPTHS SHOWN FOR PAVEMENT SECTIONS ARE COMPACTED DEPTH.
2. SIDEWALK DEPTH AT DRIVEWAY TO MATCH DRIVEWAY PAVEMENT DEPTH.
3. DEPTH OF POROUS CEMENT CONCRETE FOR DRIVEWAYS MUST BE 8" MIN.
4. 6% MAX. PERVIOUS CEMENT CONCRETE PROFILE GRADE.
5. WHERE PERVIOUS CONCRETE IS SHOWN ON PLANS FOR ALLEY, PERVIOUS CONCRETE MUST BE 8" WITH 3" AGGREGATE DISCHARGE SUBBASE.
6. APPLY SEPARATION GEOTEXTILE SEC. 9-37, ON BOTTOM AND SIDES. EXTEND GEOTEXTILE ABOVE PERVIOUS CONCRETE FOR SIDEWALK PAVEMENT. AFTER PAVEMENT HAS CURED AND ADJACENT FINISHED GRADE HAS BEEN STABILIZED, CUT SEPARATION GEOTEXTILE AT FINISHED GRADE (TYP.)

notes 5 & 6 added



HOT MIX ASPHALT PAVEMENT SIDEWALK SECTION



CONCRETE PAVER SIDEWALK SECTION

REF STD SPEC SEC 5-04, 5-06

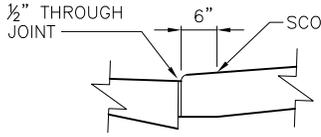


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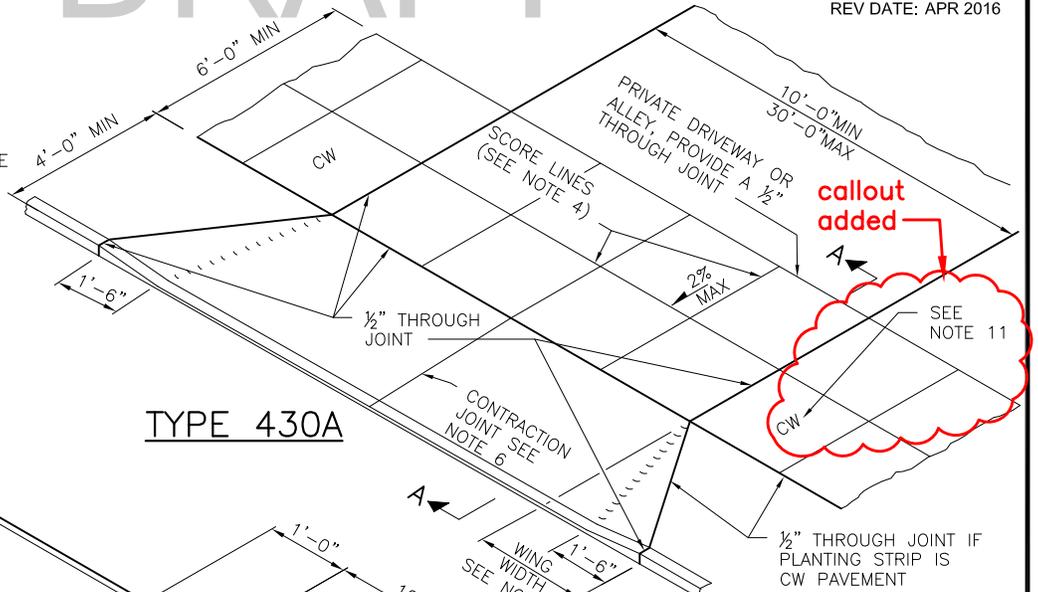
NOT TO SCALE

ALTERNATIVE WALKWAYS

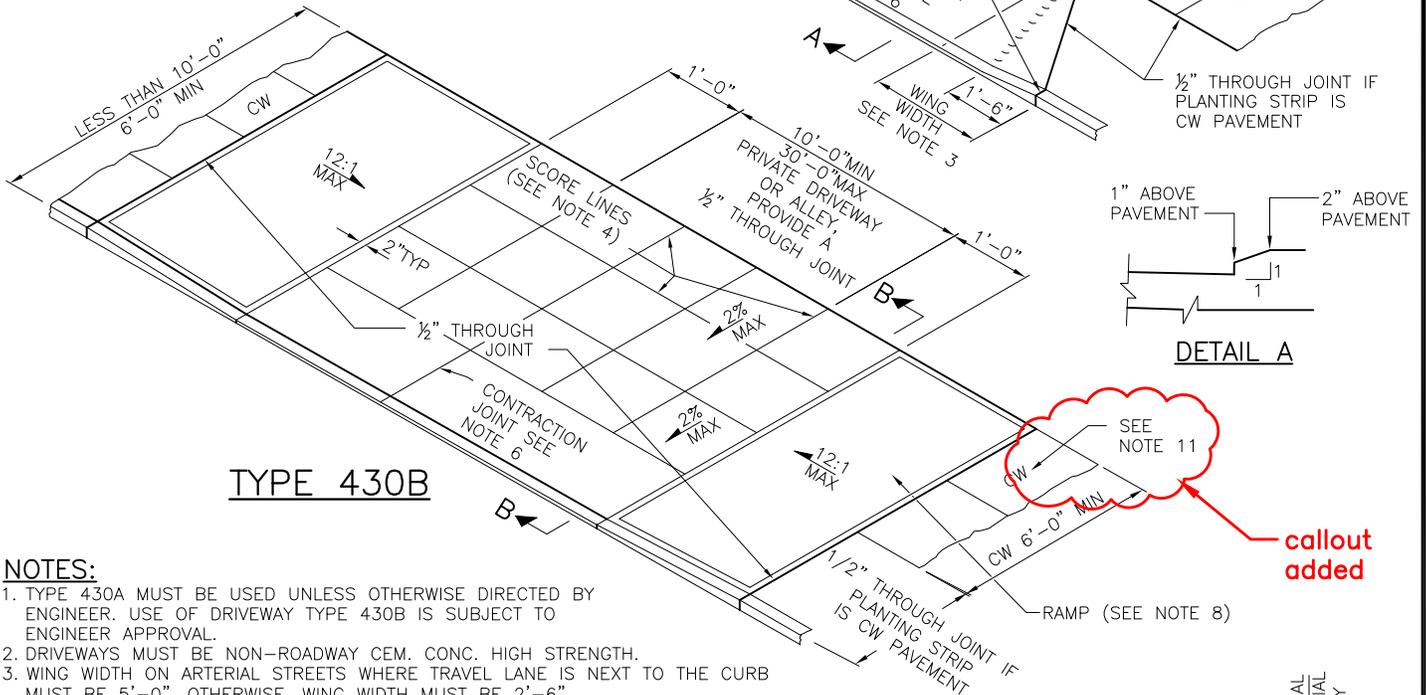
DRAFT



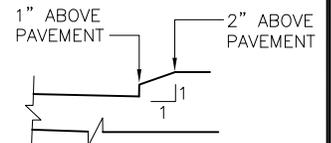
DETAIL B
DRIVENRY W/ MONOLITHIC CURB & APPROACH



TYPE 430A



TYPE 430B

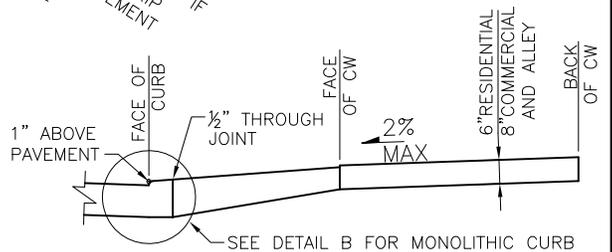


DETAIL A

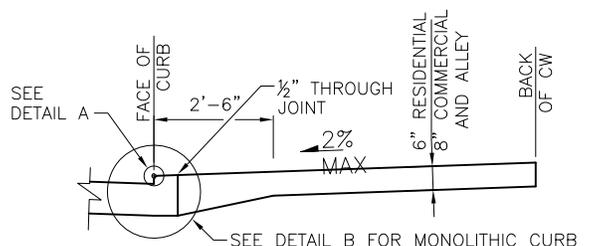
NOTES:

1. TYPE 430A MUST BE USED UNLESS OTHERWISE DIRECTED BY ENGINEER. USE OF DRIVEWAY TYPE 430B IS SUBJECT TO ENGINEER APPROVAL.
2. DRIVEWAYS MUST BE NON-ROADWAY CEM. CONC. HIGH STRENGTH.
3. WING WIDTH ON ARTERIAL STREETS WHERE TRAVEL LANE IS NEXT TO THE CURB MUST BE 5'-0". OTHERWISE, WING WIDTH MUST BE 2'-6".
4. "V" GROOVE SCORING MUST MATCH PATTERN IN ADJACENT EXISTING SIDEWALK.
5. FOR CONCRETE DRIVEWAYS CONSTRUCTED WITH CONCRETE SIDEWALK, SEE STANDARD PLAN NO 431.
6. CONCRETE DRIVEWAYS WITH A WIDTH GREATER THAN 15'-0" MUST HAVE A 3/8" TRANSVERSE CONTRACTION JOINT NEAR THE CENTERLINE OF DRIVEWAY. SEE DETAIL SECTION C-C STANDARD PLAN NO 420.
7. FOR TYPE 430A SLOPE IN THE 6'-0" MINIMUM WIDE AREA CONNECTING TO CW ON EACH SIDE OF THE DRIVEWAY MUST BE MAXIMUM 2% AND MINIMUM 0.5%. FOR TYPE 430B, SLOPE OF THE DRIVEWAY BETWEEN THE TWO RAMP SECTIONS MUST BE MAXIMUM 2% AND MINIMUM 0.5%. DRIVEWAY ON THE PRIVATE SIDE OF THE CW MAY BE SLOPED AS NEEDED TO MATCH EXISTING SITE CONDITIONS.
8. RAMP MUST HAVE A MAXIMUM SLOPE 12H:1V. AND A MINIMUM WIDTH OF 6'-0". THE CROSS SLOPE OF THE RAMP MUST BE MAXIMUM OF 50H:1V. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE PERPENDICULAR TO THE CURB.
9. ALL CHANGES IN LEVEL ACROSS JOINTS MUST BE FLUSH WITH A MAXIMUM DIFFERENCE IN ELEVATION OF 3/16 INCH.
10. ALL SLOPE GRADES MUST BE MEASURED OFF THE HORIZON-LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE CONTRACTOR MUST MAKE MINIMUM ADJUSTMENTS TO THE GRADES TO ACCOMMODATE EXISTING SITE CONDITIONS. ADJUSTMENTS ARE SUBJECT TO ENGINEER APPROVAL.
11. CONCRETE WALKWAY OUTSIDE OF THE DRIVEWAY CROSSING MAY BE PERVIOUS.

note 11 added



SECTION A-A



SECTION B-B

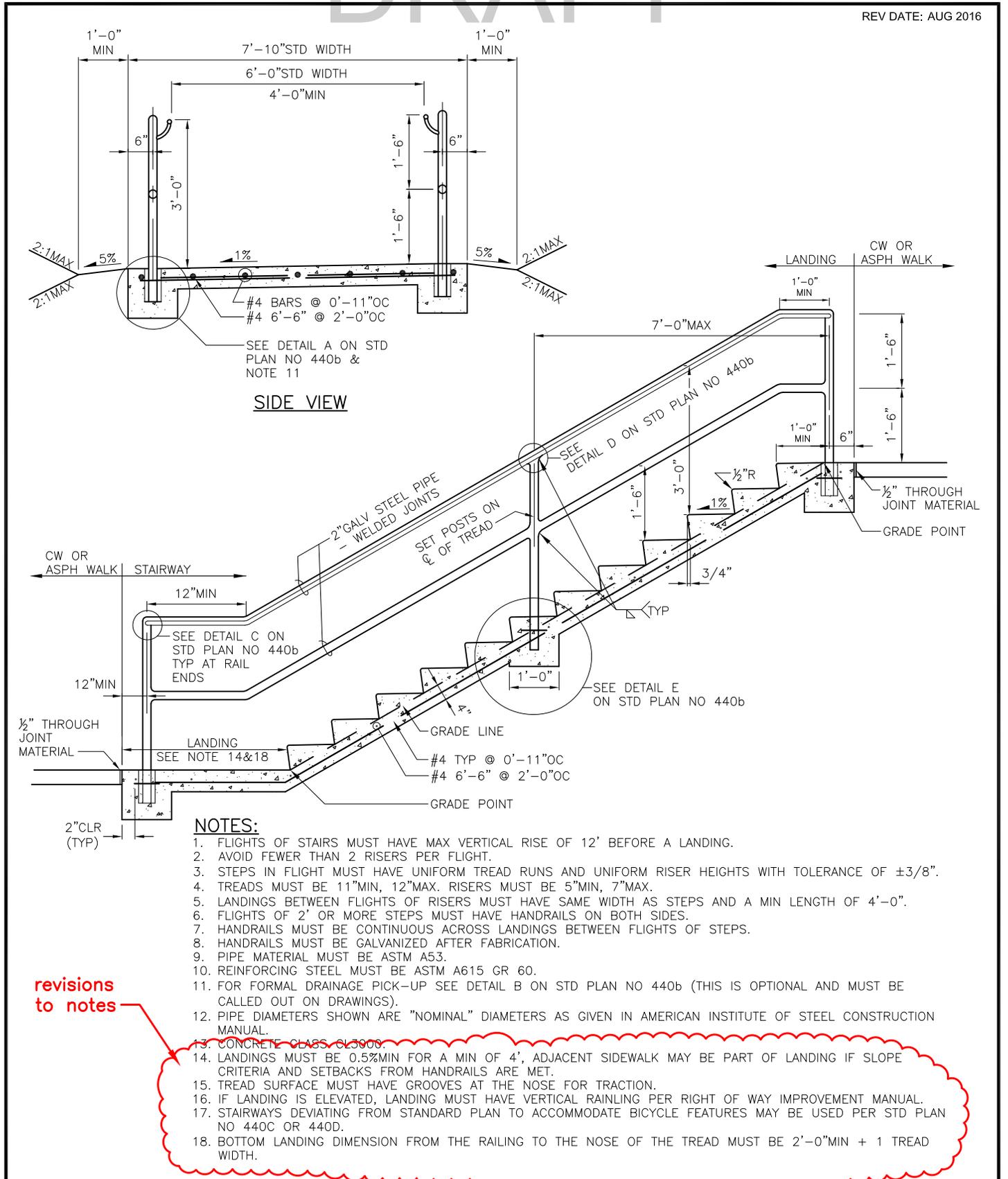


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NOT TO SCALE

TYPE 430A & 430B DRIVEWAYS

DRAFT



revisions to notes

REF STD SPEC SEC 8-18

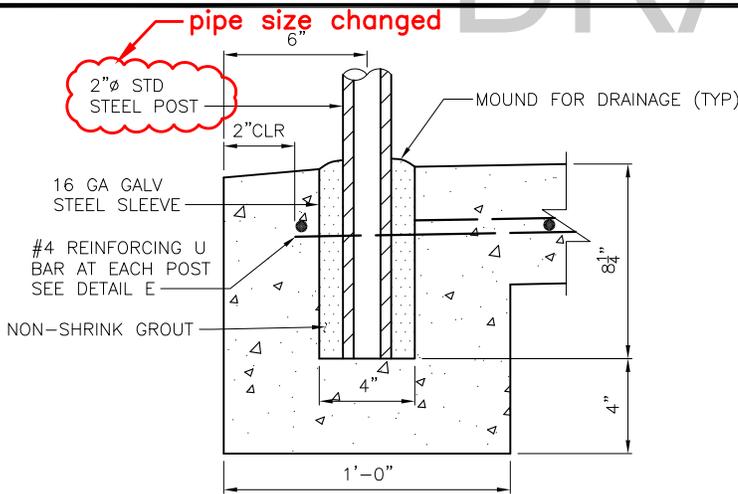


City of Seattle

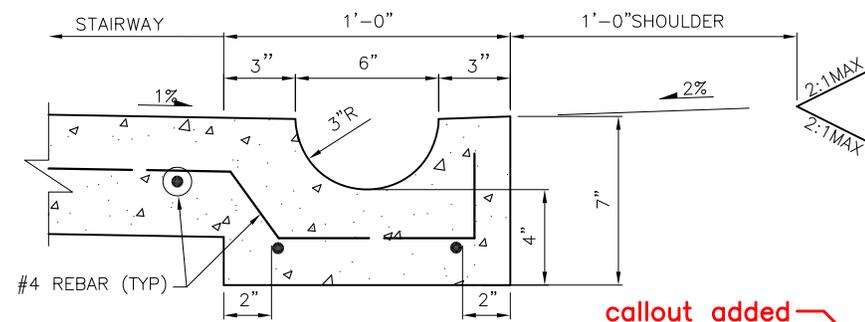
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CEMENT CONCRETE STAIRWAY & HANDRAIL

DRAFT

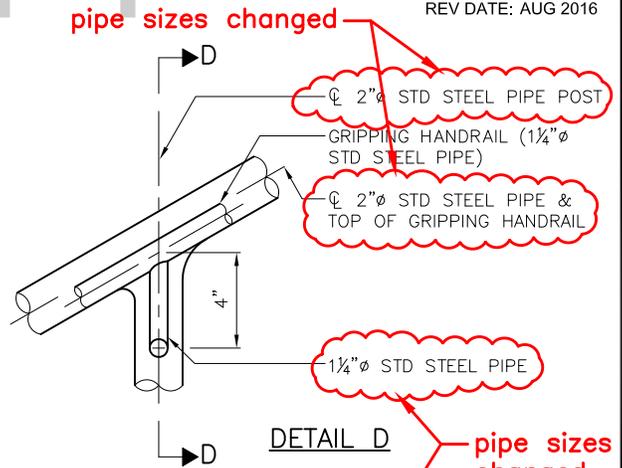


DETAIL A



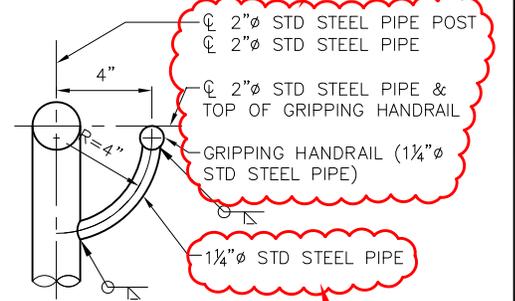
DETAIL B

SEE NOTE 11 ON STD PLAN NO 440g



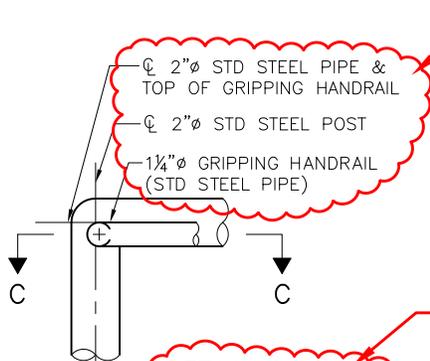
DETAIL D

pipe sizes changed



SECTION D-D

pipe size changed



DETAIL C
HAND GRIP TERMINATION

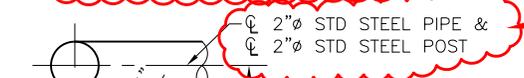
revised

callout added



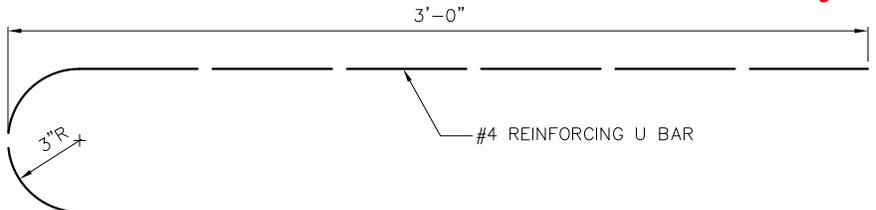
DETAIL E

pipe size changed



SECTION C-C

pipe size changed



DETAIL F

REF STD SPEC SEC 8-18

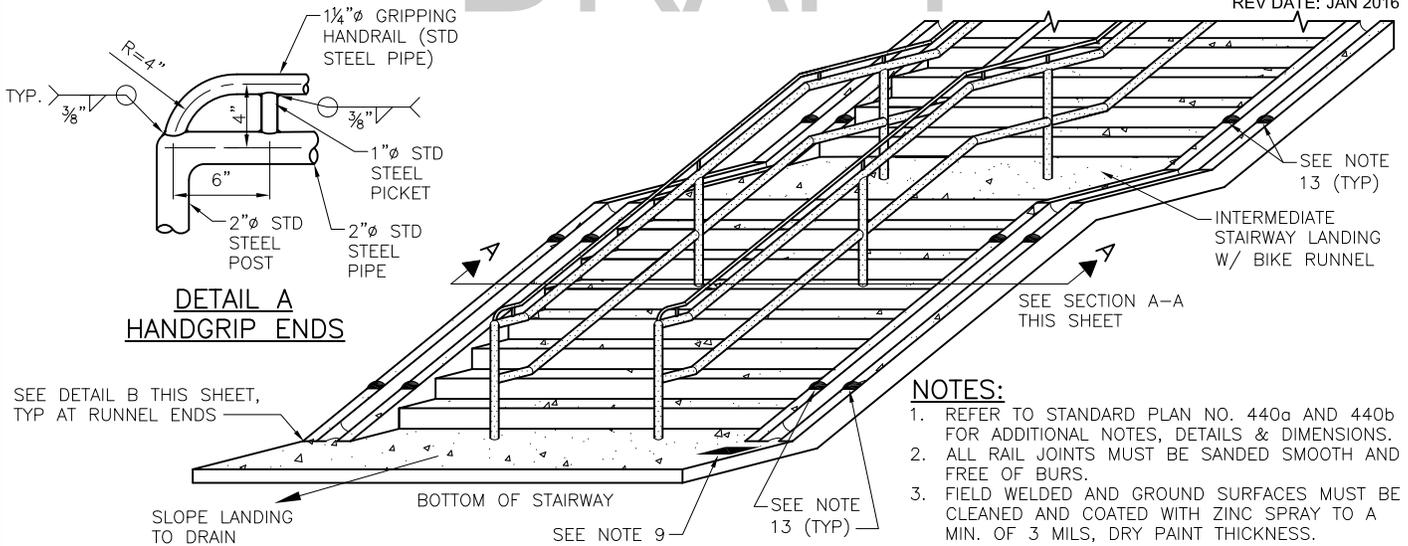


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CEMENT CONCRETE
STAIRWAY & HANDRAIL

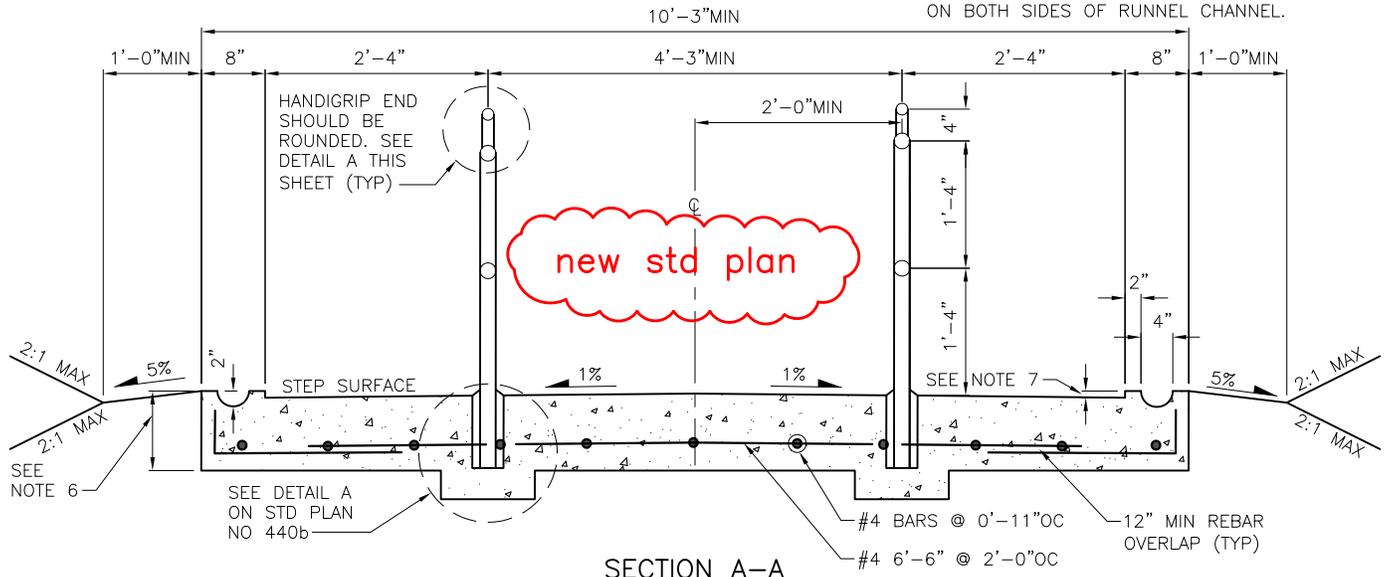
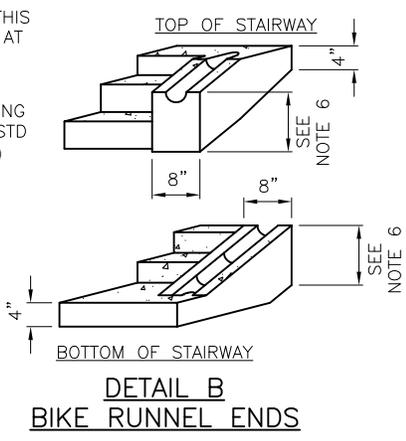
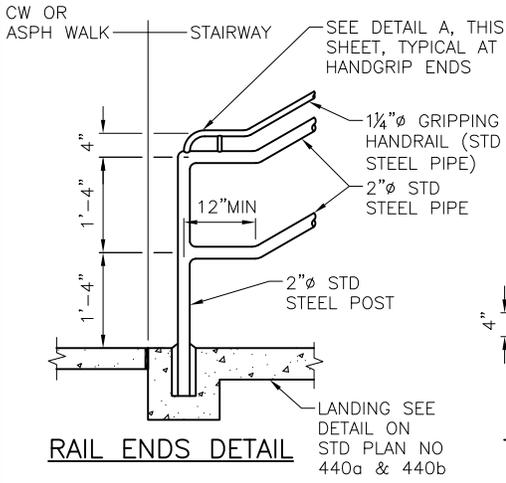
REV DATE: JAN 2016



**DETAIL A
HANDGRIP ENDS**

NOTES:

1. REFER TO STANDARD PLAN NO. 440a AND 440b FOR ADDITIONAL NOTES, DETAILS & DIMENSIONS.
2. ALL RAIL JOINTS MUST BE SANDED SMOOTH AND FREE OF BURS.
3. FIELD WELDED AND GROUND SURFACES MUST BE CLEANED AND COATED WITH ZINC SPRAY TO A MIN. OF 3 MILS, DRY PAINT THICKNESS.
4. DIMENSIONS SHOWN ON ONE SIDE OF THE SECTION VIEW ARE TYPICAL TO THE OTHER SIDE, UNLESS NOTED OTHERWISE.
5. DISTANCE BETWEEN HANDGRIP SUPPORTS MUST NOT EXCEED 6'.
6. BIKE RUNNEL SLAB THICKNESS VARIES WITH STEP RISER HEIGHT. MIN. 10.5", MAX. 12.5"
7. RUNNEL LIP HEIGHT 1.5" ABOVE STEP NOSING AND LANDING.
8. LANDINGS THAT INTERSECT OTHER STAIRS OR WALKS MUST BE AT LEAST 6' LONG TO ALLOW FOR A MIN. 4' OF CLEAR AREA WITHOUT RUNNEL & RAIL.
9. STAMP CONCRETE AT TOP AND BOTTOM OF RUNNEL. SEE CONCRETE STAMP DETAIL STD PLAN NO 440d.
10. RUNNEL LOCATION MUST BE ON EITHER SIDE OF STAIRWAY AS DETERMINED BY ENGINEER.
11. LONG STAIRWAYS OR STAIRWAYS WITH SIGHT OBSTRUCTIONS TO CYCLISTS MUST HAVE SIDEWALK BREAKS TO ALLOW ONCOMING CYCLISTS PASSAGE. LOCATIONS OF SIDEWALK BREAKS TO BE DETERMINED BY ENGINEER.
12. ANY CONSTRUCTION OUTSIDE OF RUNNEL MUST ALLOW ENOUGH CLEARANCE FOR BIKE PEDALS AND HANDLEBARS FROM INTERFERING WITH MOVEMENT.
13. INSTALL ANTI-SKATE DEVICES 3' FROM THE TOP & BOTTOM OF LANDINGS ON ALL HANDRAILS & ON BOTH SIDES OF RUNNEL CHANNEL.



REF STD SPEC SEC 8-18

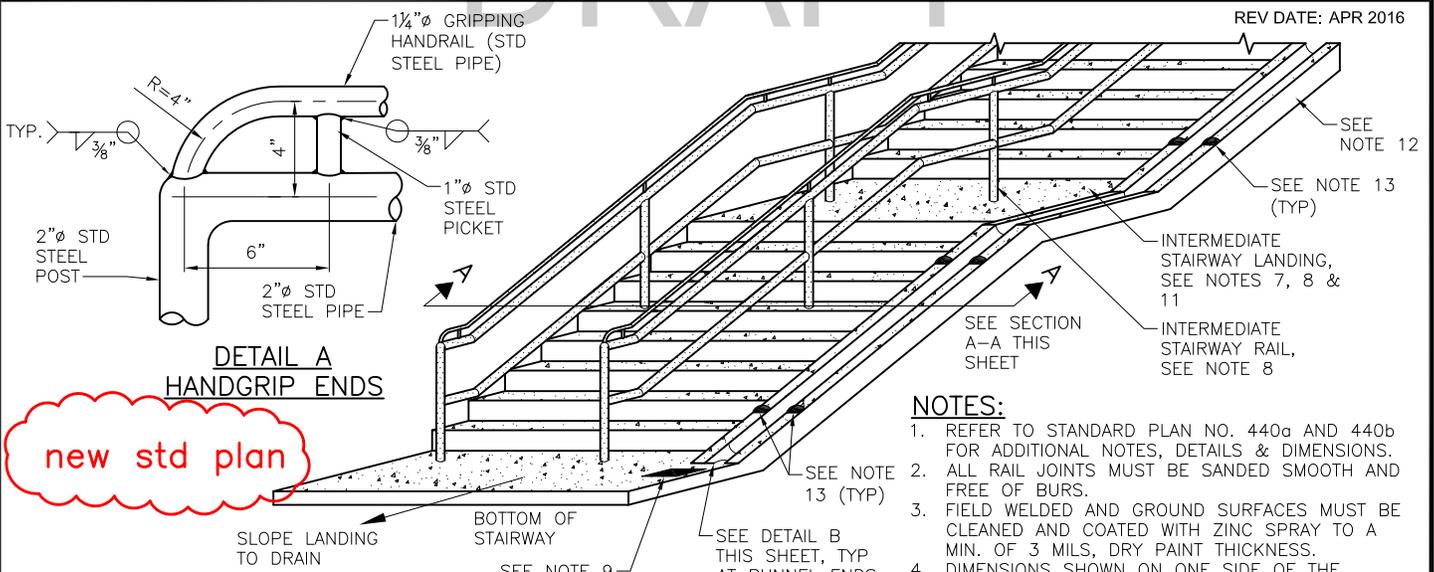


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NOT TO SCALE

**CEMENT CONCRETE
STAIRWAY & BIKE RUNNEL**

REV DATE: APR 2016



DETAIL A
HANDGRIP ENDS

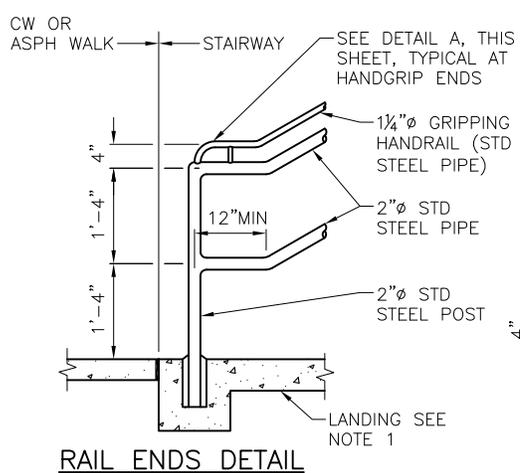
new std plan

SLOPE LANDING TO DRAIN

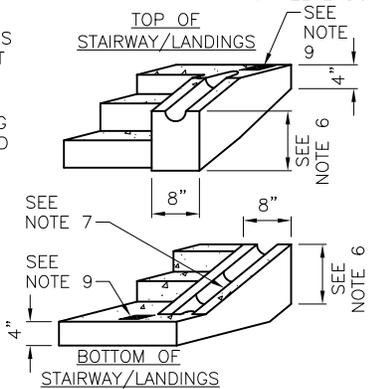
BOTTOM OF STAIRWAY

SEE NOTE 13 (TYP)

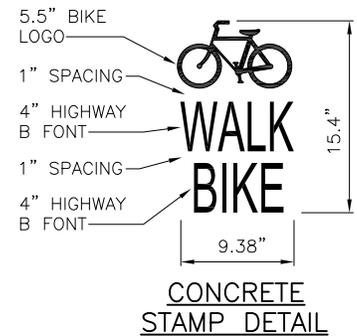
SEE DETAIL B THIS SHEET, TYP AT RUNNEL ENDS



RAIL ENDS DETAIL

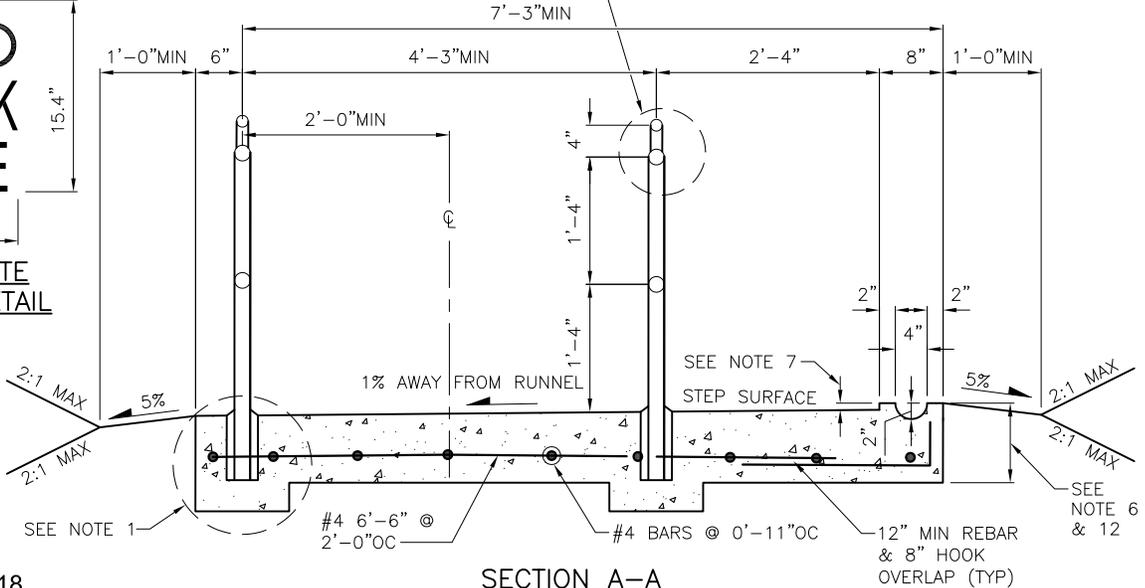


DETAIL B
BIKE RUNNEL ENDS



CONCRETE
STAMP DETAIL

HANDGRIP END SHOULD BE ROUNDED.
SEE DETAIL A THIS SHEET (TYP)



SECTION A-A

NOTES:

1. REFER TO STANDARD PLAN NO. 440a AND 440b FOR ADDITIONAL NOTES, DETAILS & DIMENSIONS.
2. ALL RAIL JOINTS MUST BE SANDED SMOOTH AND FREE OF BURS.
3. FIELD WELDED AND GROUND SURFACES MUST BE CLEANED AND COATED WITH ZINC SPRAY TO A MIN. OF 3 MILS, DRY PAINT THICKNESS.
4. DIMENSIONS SHOWN ON ONE SIDE OF THE SECTION VIEW ARE TYPICAL TO THE OTHER SIDE, UNLESS NOTED OTHERWISE.
5. DISTANCE BETWEEN HANDGRIP SUPPORTS MUST NOT EXCEED 6'.
6. BIKE RUNNEL SLAB THICKNESS VARIES WITH STEP RISER HEIGHT. MIN. 10.5", MAX. 12.5"
7. RUNNEL LIP HEIGHT 1.5" ABOVE STEP NOSING AND LANDING.
8. LANDINGS THAT INTERSECT OTHER STAIRS OR WALKS MUST BE AT LEAST 6' LONG TO ALLOW FOR A MIN. 4' OF CLEAR AREA WITHOUT RUNNEL & RAIL.
9. STAMP CONCRETE AT TOP AND BOTTOM OF RUNNEL. SEE CONCRETE STAMP DETAIL.
10. RUNNEL LOCATION MUST BE ON EITHER SIDE OF STAIRWAY AS DETERMINED BY ENGINEER.
11. LONG STAIRWAYS OR STAIRWAYS WITH SIGHT OBSTRUCTIONS TO CYCLISTS MUST HAVE SIDEWALK BREAKS TO ALLOW ONCOMING CYCLISTS PASSAGE. LOCATIONS OF SIDEWALK BREAKS TO BE DETERMINED BY ENGINEER.
12. ANY CONSTRUCTION OUTSIDE OF RUNNEL MUST ALLOW ENOUGH CLEARANCE FOR BIKE PEDALS AND HANDLEBARS FROM INTERFERING WITH MOVEMENT.
13. INSTALL ANTI-SKATE DEVICES 3' FROM THE TOP & BOTTOM OF LANDINGS ON ALL HANDRAILS & ON BOTH SIDES OF RUNNEL CHANNEL.

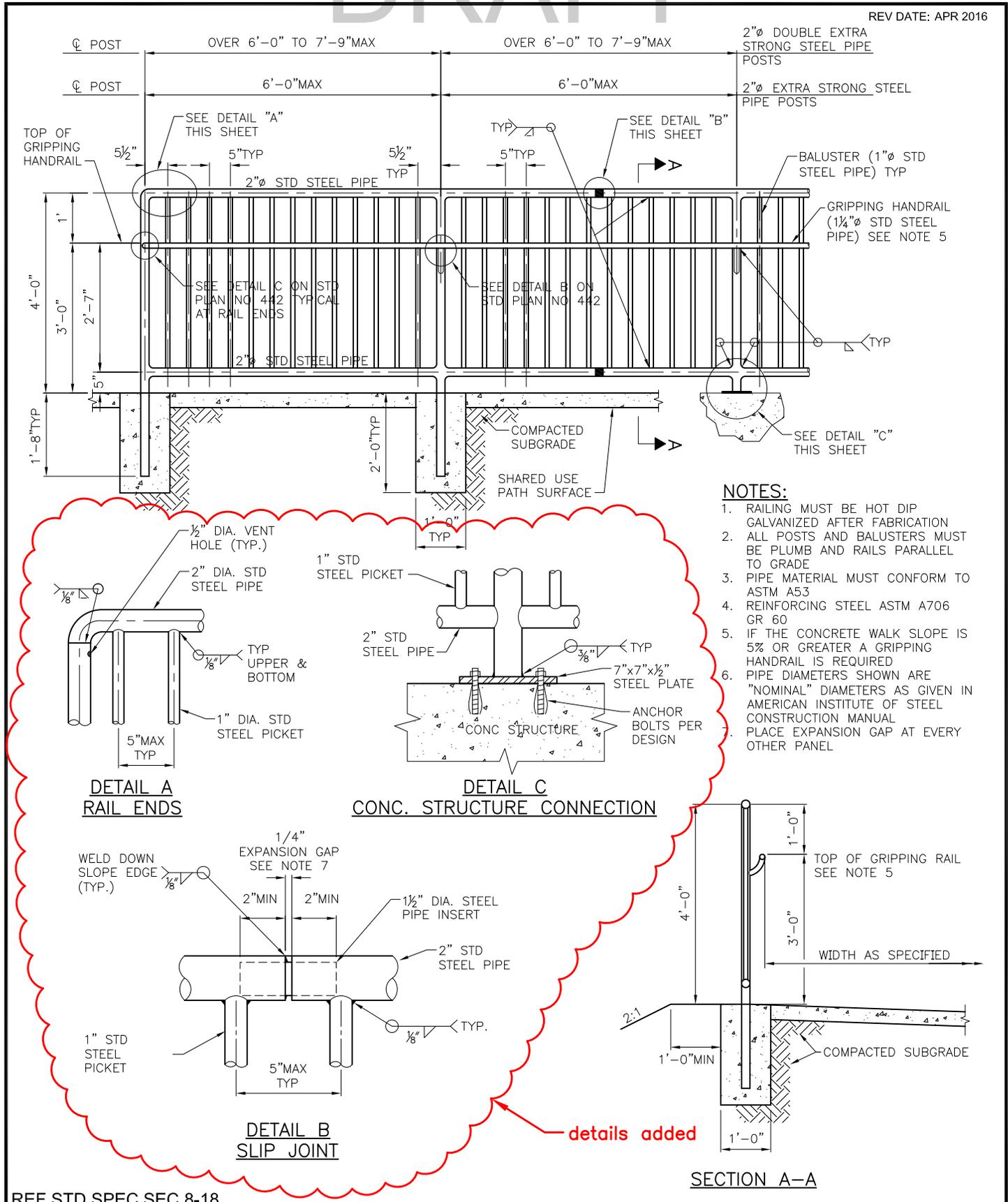
REF STD SPEC SEC 8-18



City of Seattle

NOT TO SCALE

CEMENT CONCRETE
STAIRWAY & SINGLE BIKE RUNNEL



NOTES:

1. RAILING MUST BE HOT DIP GALVANIZED AFTER FABRICATION
2. ALL POSTS AND BALUSTERS MUST BE PLUMB AND RAILS PARALLEL TO GRADE
3. PIPE MATERIAL MUST CONFORM TO ASTM A53
4. REINFORCING STEEL ASTM A706 GR 60
5. IF THE CONCRETE WALK SLOPE IS 5% OR GREATER A GRIPPING HANDRAIL IS REQUIRED
6. PIPE DIAMETERS SHOWN ARE "NOMINAL" DIAMETERS AS GIVEN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL
7. PLACE EXPANSION GAP AT EVERY OTHER PANEL

details added

REF STD SPEC SEC 8-18



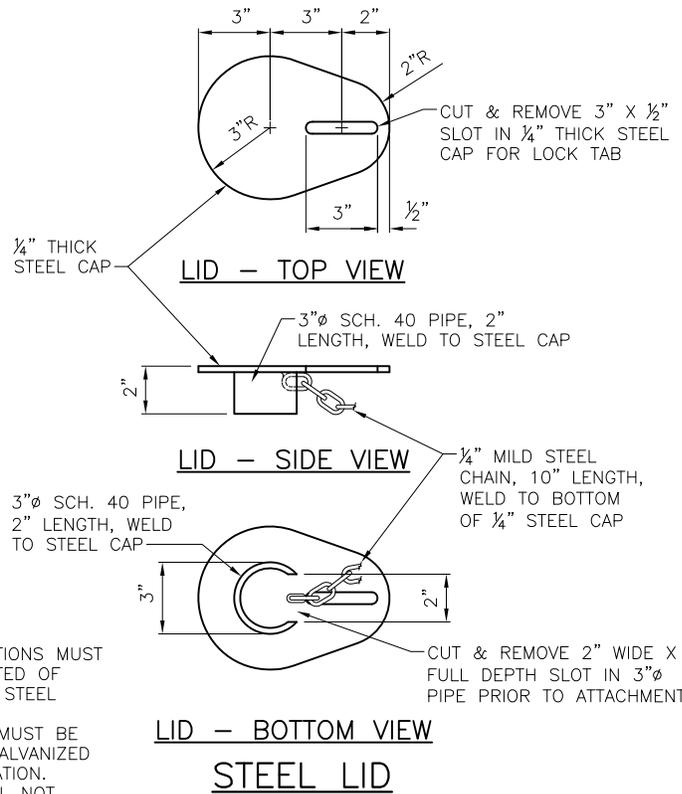
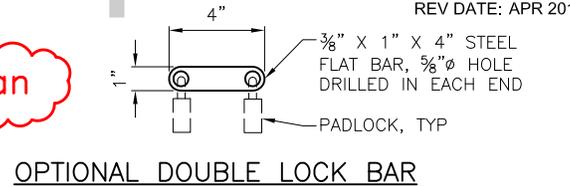
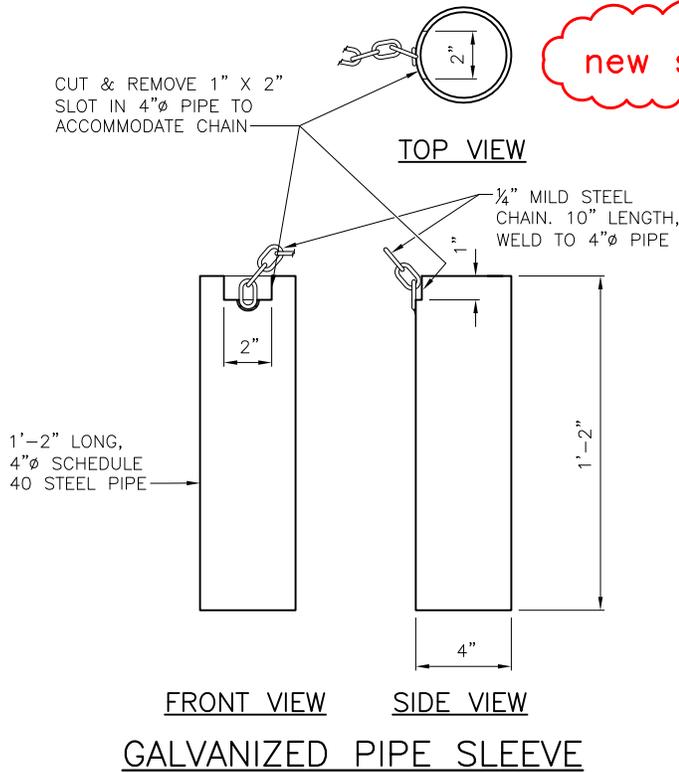
City of Seattle

NOT TO SCALE

VERTICAL RAILING

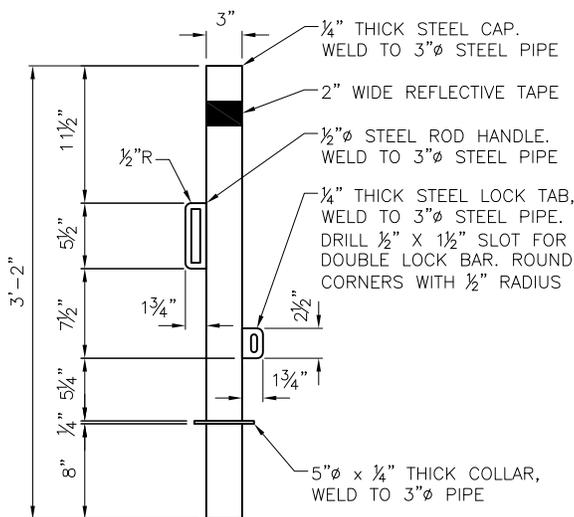
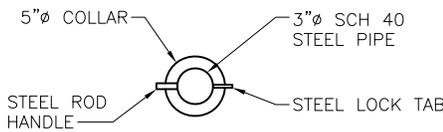
DRAFT

new std plan

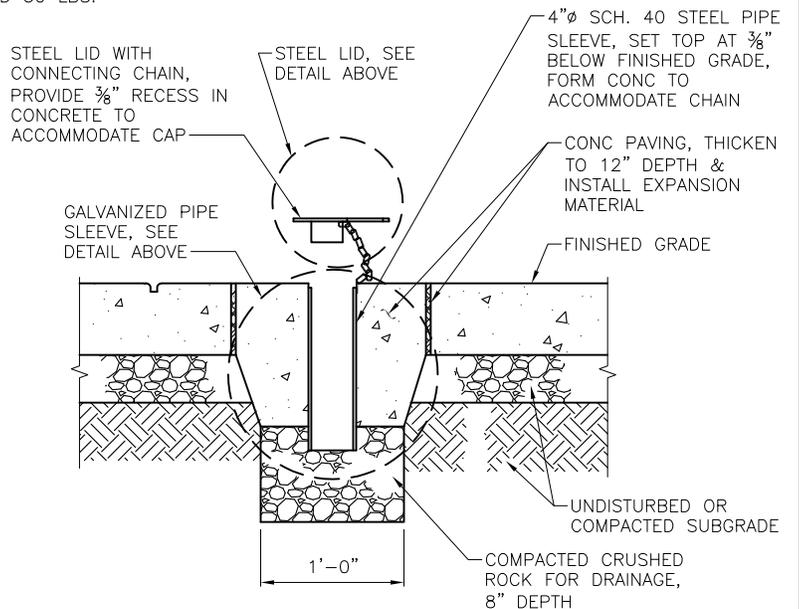


NOTES:

1. ALL PIPE SECTIONS MUST BE CONSTRUCTED OF SCHEDULE 40 STEEL PIPE AND ALL COMPONENTS MUST BE HOT DIPPED GALVANIZED AFTER FABRICATION.
2. BOLLARD SHALL NOT EXCEED 50 LBS.



BOLLARD ELEVATION
BOLLARD



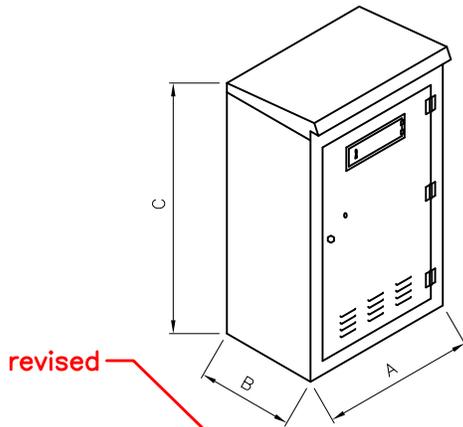
REF STD SPEC SEC 8-02



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REMOVABLE STEEL BOLLARD

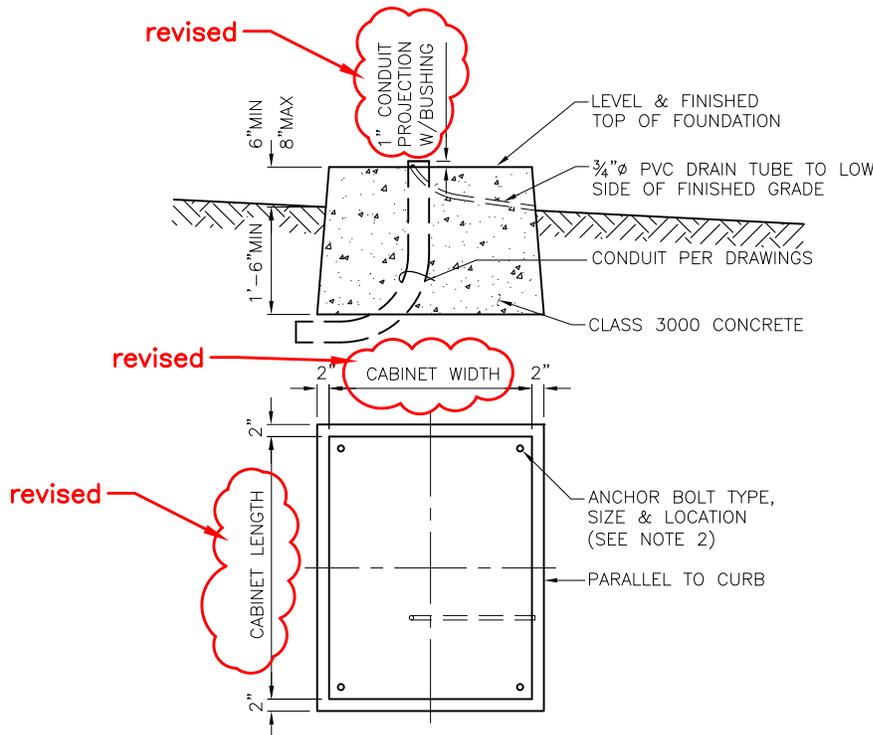


NOTES:

1. UNLESS OTHERWISE SPECIFIED, TRAFFIC SIGNAL CONTROLLER CABINET MUST BE FURNISHED BY THE CITY
2. UNLESS OTHERWISE SPECIFIED, EXACT CABINET DIMENSIONS & ANCHOR BOLT LOCATIONS MUST BE PROVIDED BY THE TRAFFIC SIGNAL SHOPS
3. PLACE CABINET DOOR ON SIDEWALK SIDE OF FOUNDATION
4. SEAL CABINET TO FOUNDATION WITH GREY OR CLEAR SILICON TO PREVENT MOISTURE FROM ENTERING THE CABINET

DIMENSION	TYPE II	TYPE III	TYPE VI
A	30"	44"	44"
B	17"	25 1/2"	25 1/2"
C	38" TO 52"	50" TO 58"	64 3/4" TO 67 1/2"

SIGNAL CONTROLLER CABINET-TYPES II, III, VI



SIGNAL CONTROLLER FOUNDATION

SEE STD PLANS NO 500b & 500c FOR CONDUIT LAYOUT

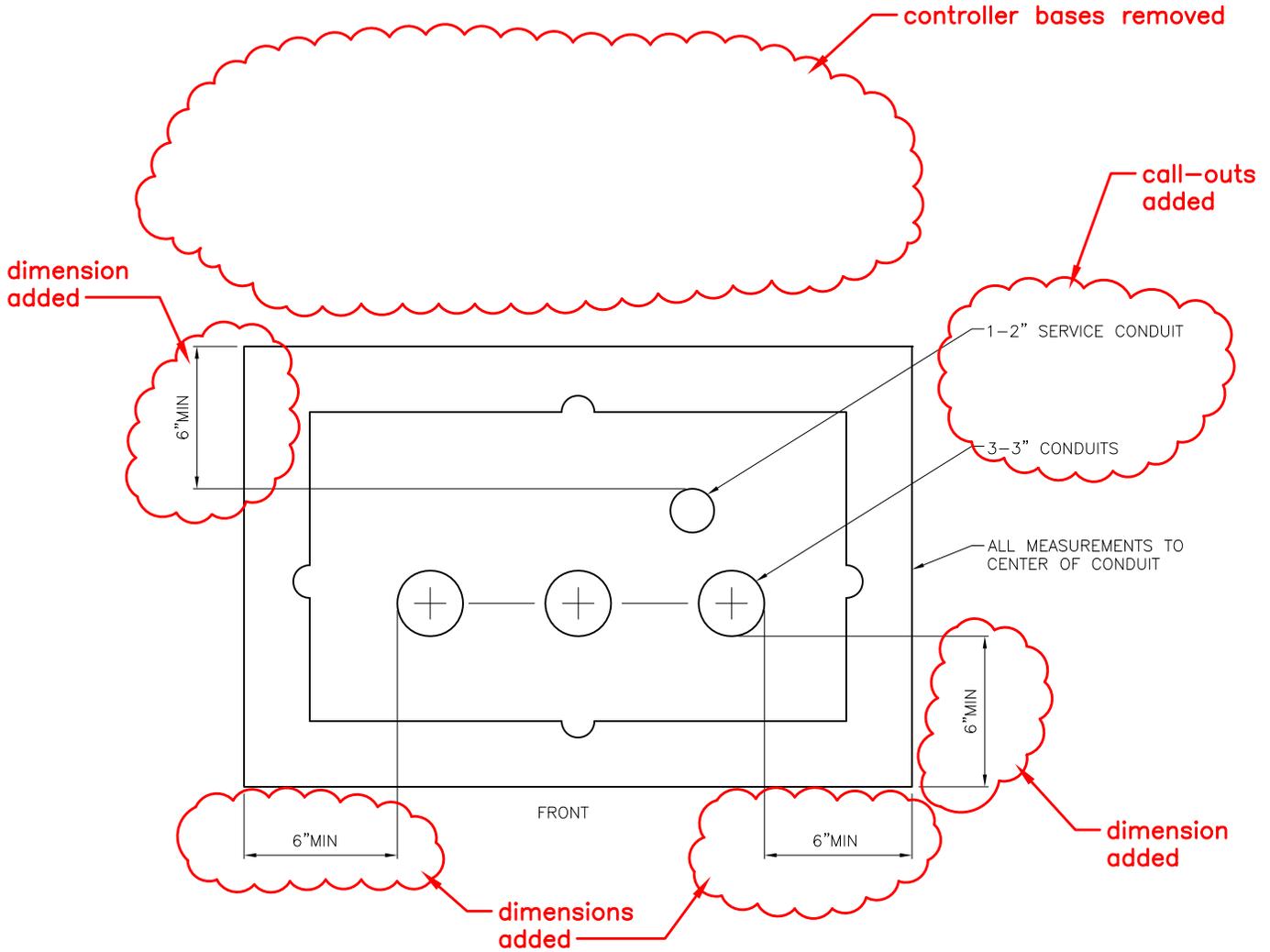
REF STD SPEC SEC 8-31 & 8-32



City of Seattle

NOT TO SCALE

**SIGNAL CONTROLLER
CABINET & FOUNDATION**



CONDUIT LAYOUT - SIGNAL CONTROLLER FOUNDATION

REF STD SPEC SEC 8-31 & 8-32

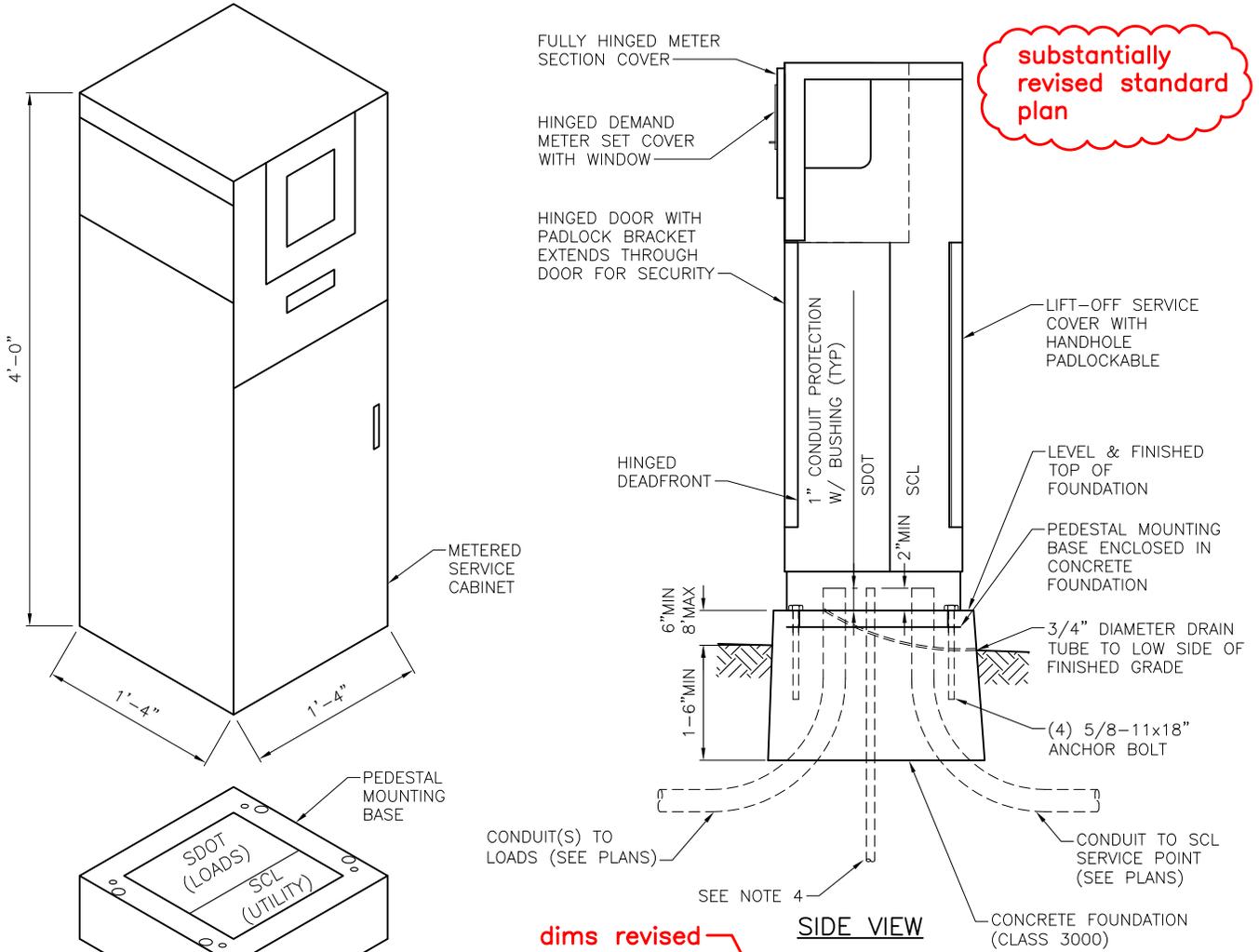


City of Seattle

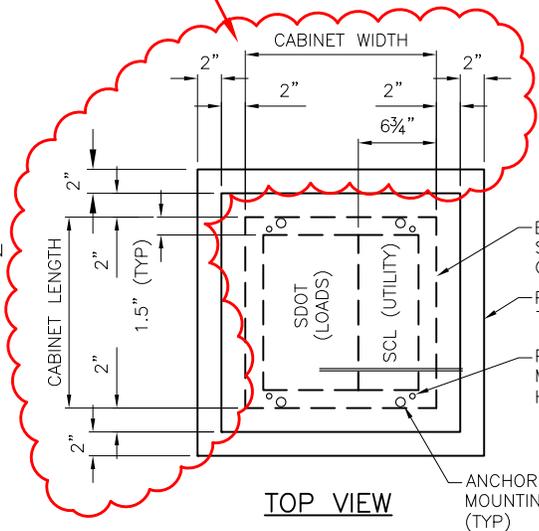
NOT TO SCALE

SIGNAL CONTROLLER FOUNDATION CONDUIT LAYOUT

substantially revised standard plan



dims revised



ISOMETRIC VIEW

NOTES:

- 36" MINIMUM CLEARANCE MUST BE REQUIRED IN FRONT OF BOTH FRONT AND BACK CABINET DOOR.
- SEAL CABINET TO FOUNDATION WITH GREY OR CLEAR SILICON TO PREVENT MOISTURE FROM ENTERING THE CABINET.
- EXACT SERVICE CABINET DIMENSIONS, ANCHOR BOLT LOCATIONS AND PEDESTAL MOUNTING HOLES MUST BE PROVIDED BY THE MANUFACTURER.
- GROUND ROD 3/4"x120" COPPER CLAD WITH GROUND ROD CLAMP. A SECOND GROUND MUST BE INSTALLED A MINIMUM 8' AWAY IN A GROUND ROD HANDHOLE AS PER CITY OF SEATTLE STANDARD PLAN NO 550b. COORDINATE WITH ELECTRICAL INSPECTOR FOR LOCATION. INSTALL #4 AWG COPPER GROUND WIRE BETWEEN CABINET FOUNDATION AND GROUND ROD HANDHOLE

spec sections added

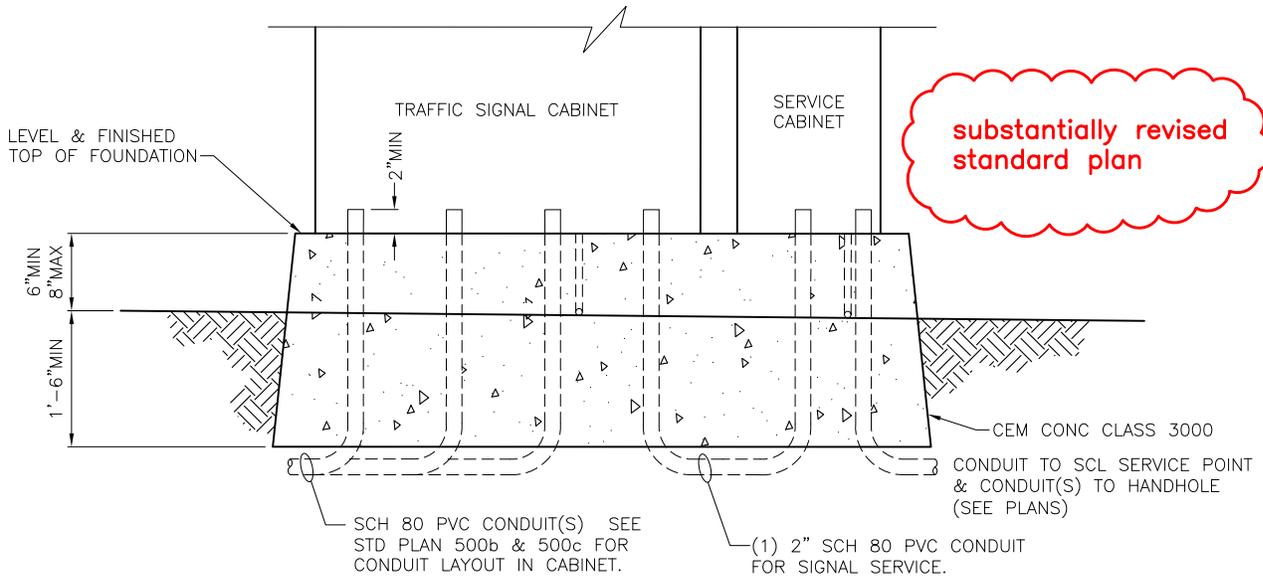
REF STD SPEC SEC 8-31,8-32



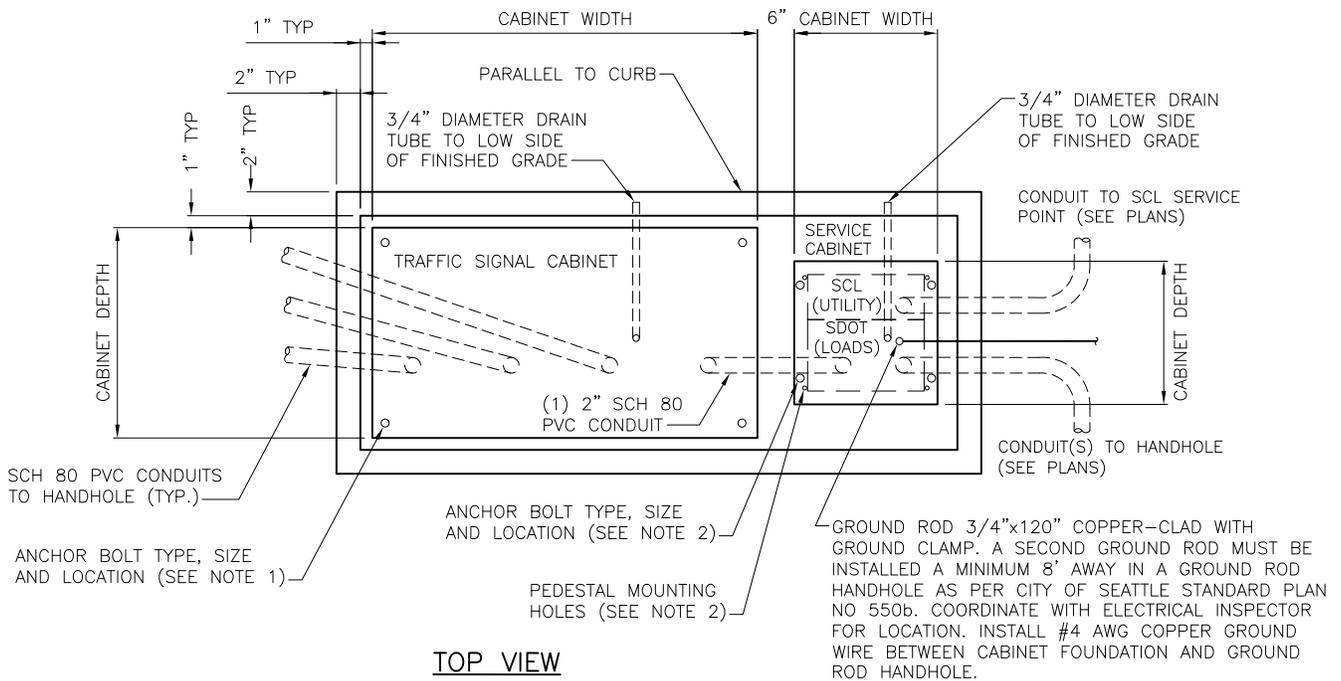
City of Seattle

NOT TO SCALE

SERVICE CABINET FOUNDATION DETAIL



SIDE VIEW



TOP VIEW

JOINT SIGNAL CONTROLLER/SERVICE CABINET FOUNDATION DETAIL

NOT TO SCALE

NOTES:

1. FOR SIGNAL CONTROLLER DIMENSIONS AND OTHER REQUIREMENTS, SEE STD PLAN NO. 500a.
2. FOR SERVICE CABINET DIMENSIONS AND OTHER REQUIREMENTS, SEE STD PLAN NO 501a.
3. SEAL CABINETS TO FOUNDATION WITH GREY OR CLEAR SILICON TO PREVENT MOISTURE FROM ENTERING THE CABINET.
4. THE SERVICE CABINET MUST BE PLACED ON THE OPPOSITE SIDE OF THE CONTROLLER CABINET FROM THE UPS.

note 4 added

spec sections added

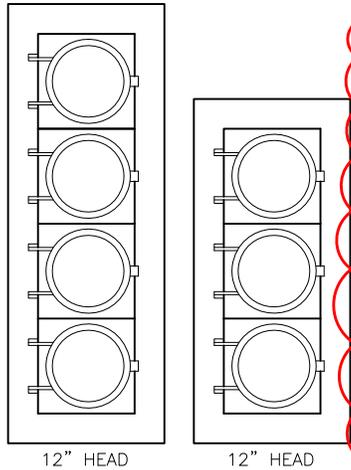
REF STD SPEC SEC 8-31,8-32



City of Seattle

NOT TO SCALE

JOINT SIGNAL CONTROLLER/
SERVICE CABINET
FOUNDATION DETAIL



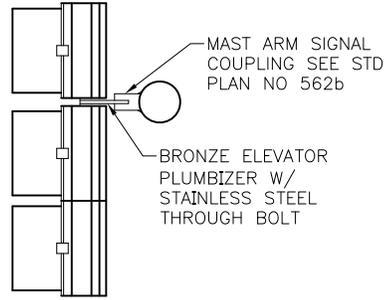
TYPICAL SIGNAL FACES

W/ TUNNEL VISORS &
5" BACKPLATE (LOUVERED)

1" YELLOW, DIAMOND GRADE RETRO REFLECTIVE TAPE

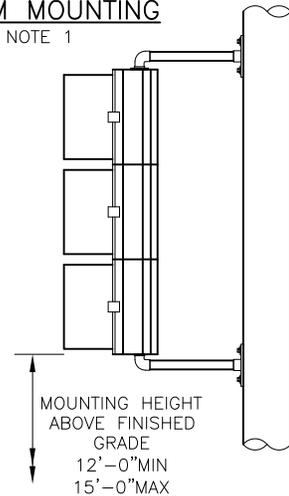
8" heads removed

note added



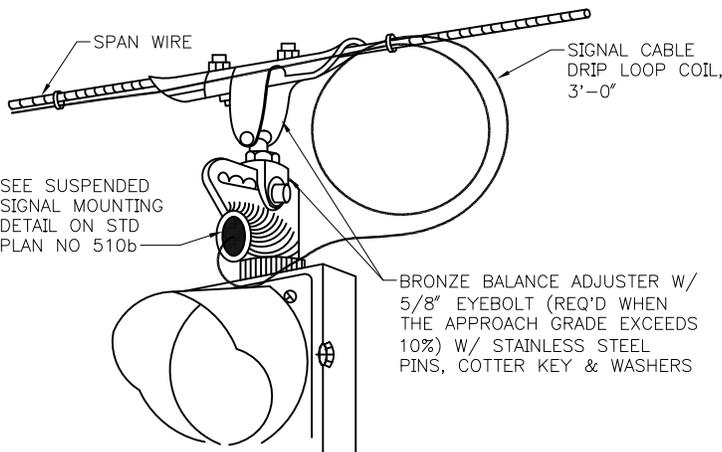
MAST ARM MOUNTING

SEE NOTE 1



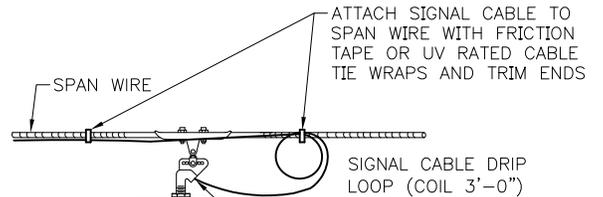
BRACKET MOUNTING

FOR SIGNAL HEAD BRACKET ASSEMBLY
SEE STD PLAN NO 511



SEE SUSPENDED
SIGNAL MOUNTING
DETAIL ON STD
PLAN NO 510b

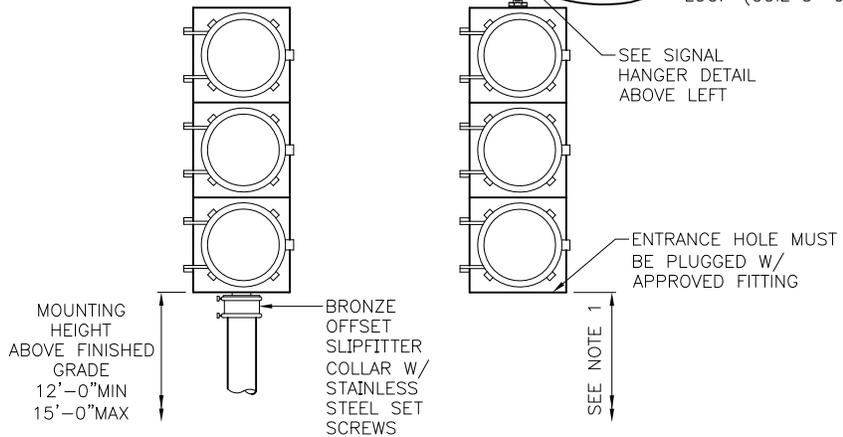
BRONZE BALANCE ADJUSTER W/
5/8" EYEBOLT (REQ'D WHEN
THE APPROACH GRADE EXCEEDS
10%) W/ STAINLESS STEEL
PINS, COTTER KEY & WASHERS



SIGNAL HANGER DETAIL

NOTES:

1. VERTICAL CLEARANCE: 17' MIN TO ROADWAY 19'-0" MAX (ON TRUCK ROUTES USE 18' TO 19')
2. BACKPLATES HAVE BEEN OMITTED FROM VARIOUS VIEWS FOR CLARITY



PEDESTAL TOP MOUNTING

FOR PEDESTAL SEE STD PLAN NO 524

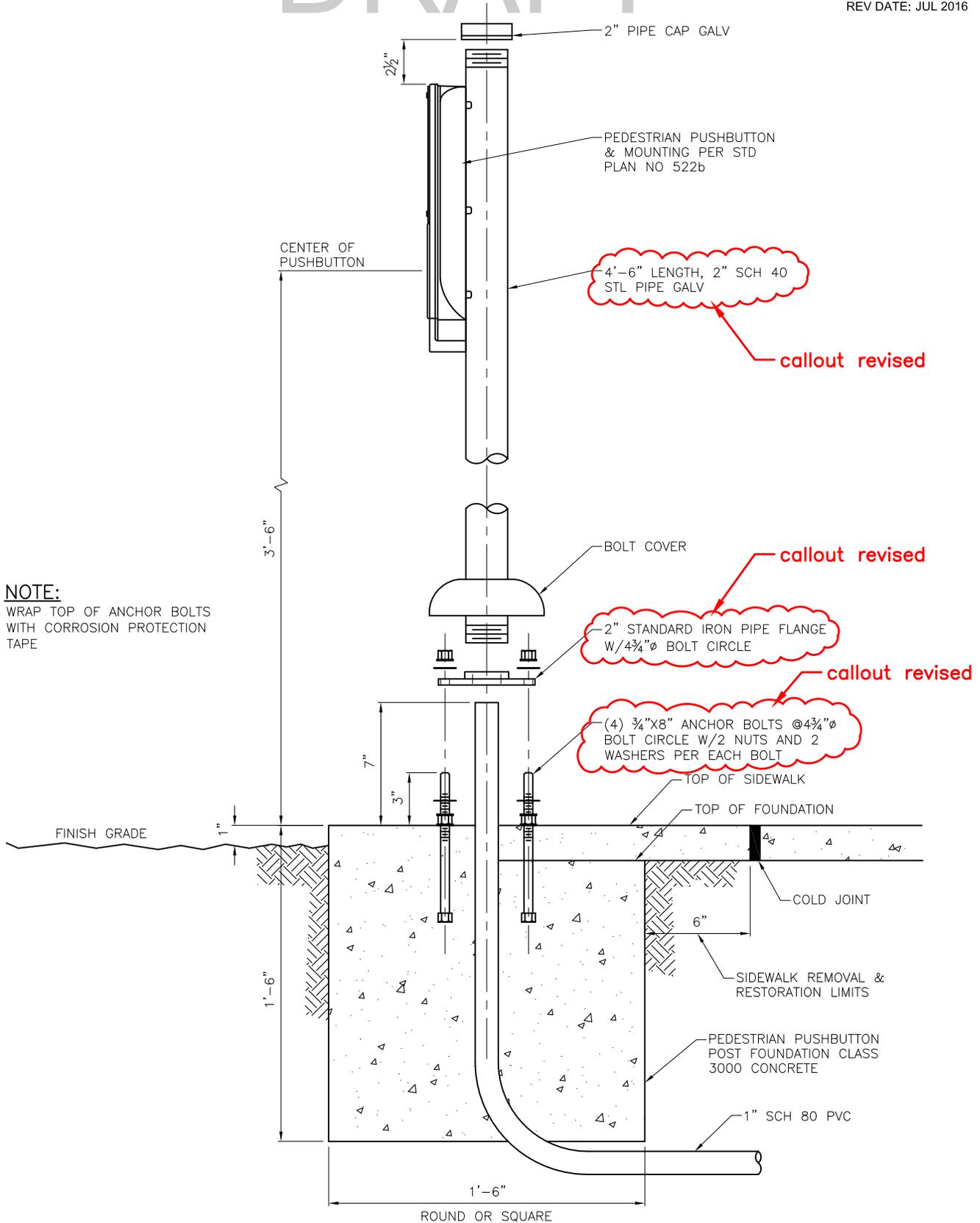
REF STD SPEC SEC 8-31



City of Seattle

NOT TO SCALE

VEHICULAR SIGNAL MOUNTING



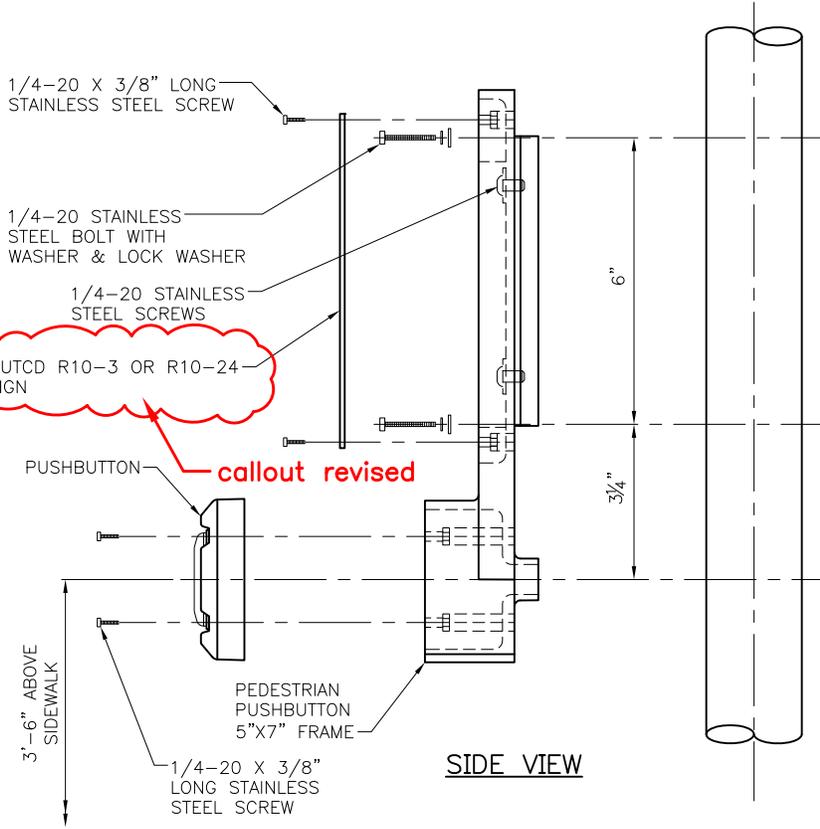
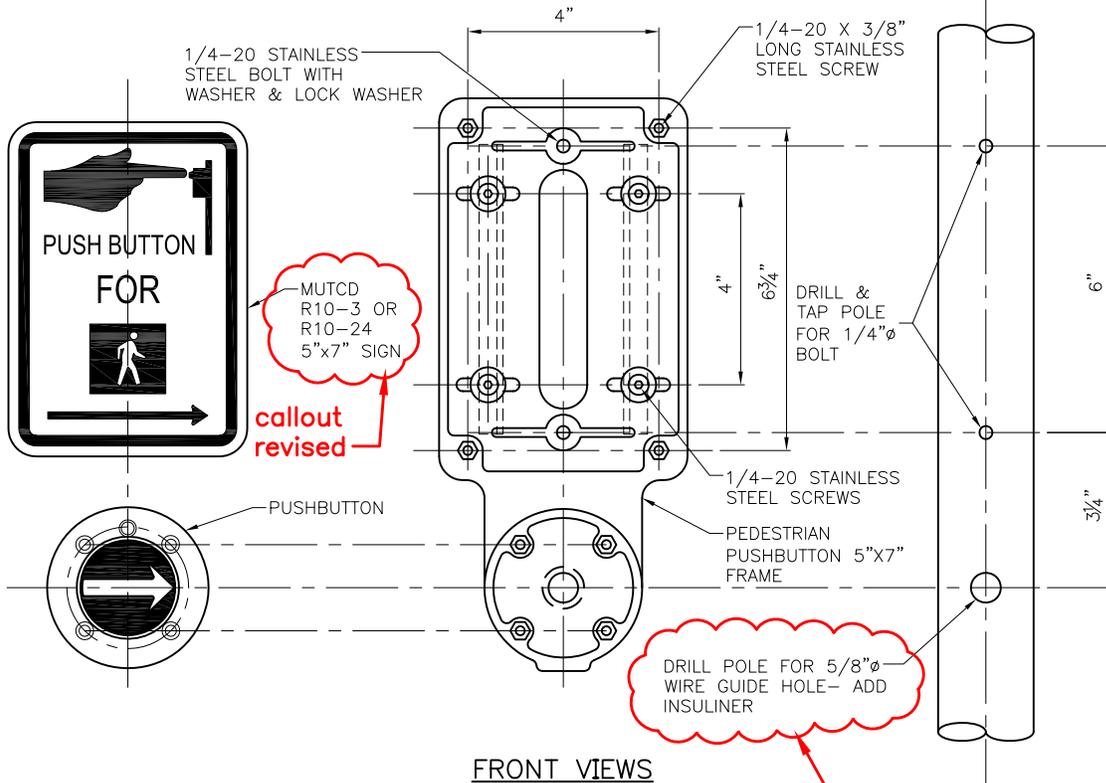
REF STD SPEC SEC 8-31 & 8-32



City of Seattle

NOT TO SCALE

PEDESTRIAN PUSHBUTTON POST & FOUNDATION



NOTES:

1. PUSHBUTTON MUST HAVE DIRECTIONAL ARROW AS SPECIFIED ON THE PLANS.
2. INSTALLATION OF TWO PEDESTRIAN PUSHBUTTON ASSEMBLIES MUST BE APPROVED BY THE ENGINEER.
3. DETAIL SHOWS PUSHBUTTON INSTALLED ON METAL POLE. PUSHBUTTON INSTALLED ON OTHER MATERIALS MUST BE PER MANUFACTURER'S RECOMMENDATION.

note 2 revised, note 3 added

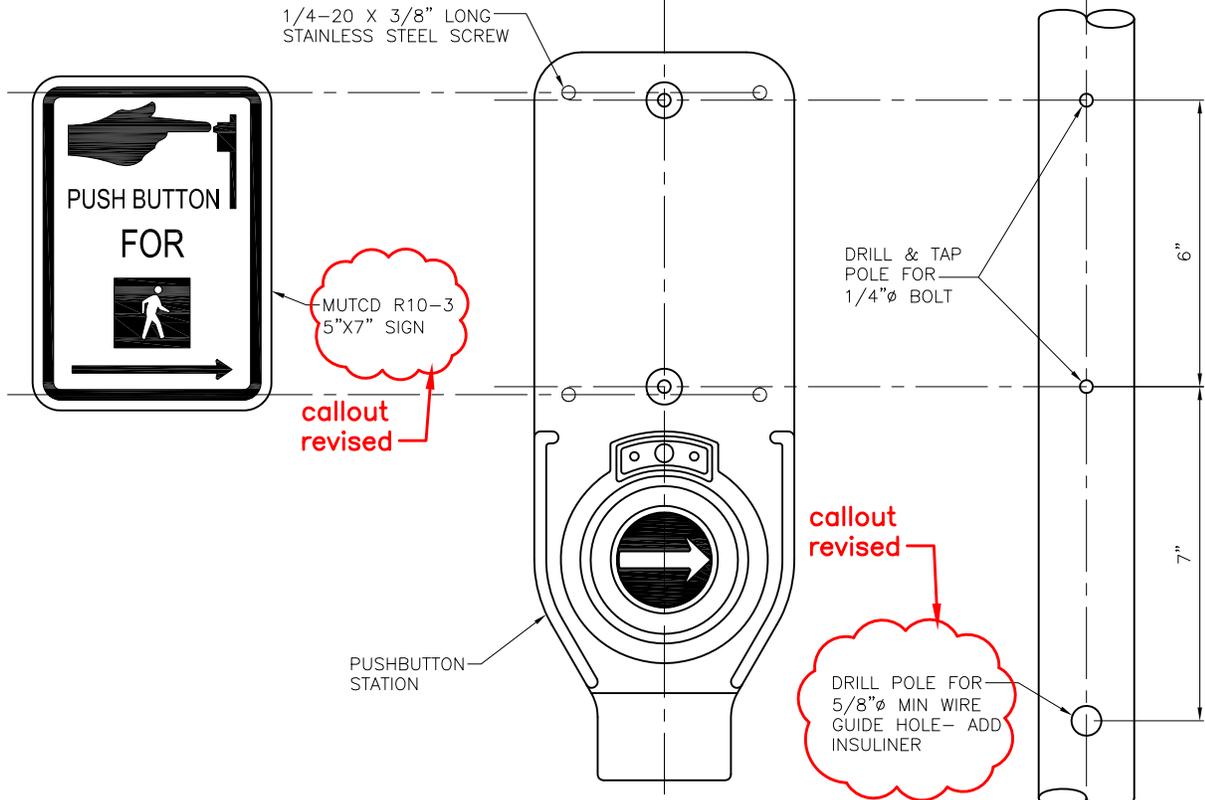
REF STD SPEC SEC 8-31



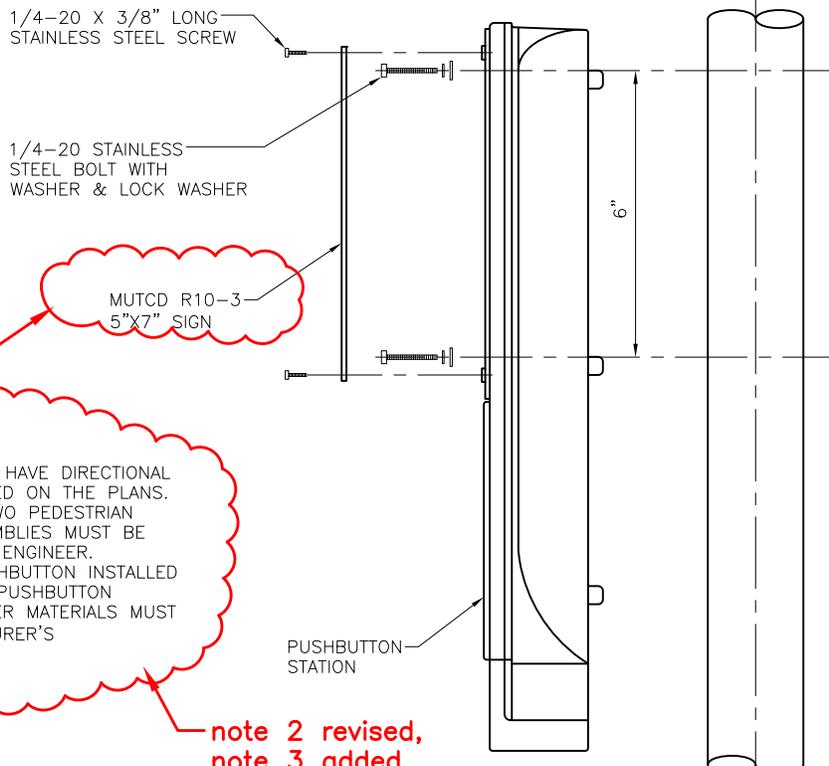
City of Seattle

NOT TO SCALE

PEDESTRIAN PUSHBUTTON ASSEMBLY



FRONT VIEWS



SIDE VIEW

- NOTES:**
1. PUSHBUTTON MUST HAVE DIRECTIONAL ARROW AS SPECIFIED ON THE PLANS.
 2. INSTALLATION OF TWO PEDESTRIAN PUSHBUTTON ASSEMBLIES MUST BE APPROVED BY THE ENGINEER.
 3. DETAIL SHOWS PUSHBUTTON INSTALLED ON METAL POLE. PUSHBUTTON INSTALLED ON OTHER MATERIALS MUST BE PER MANUFACTURER'S RECOMMENDATION.

note 2 revised, note 3 added

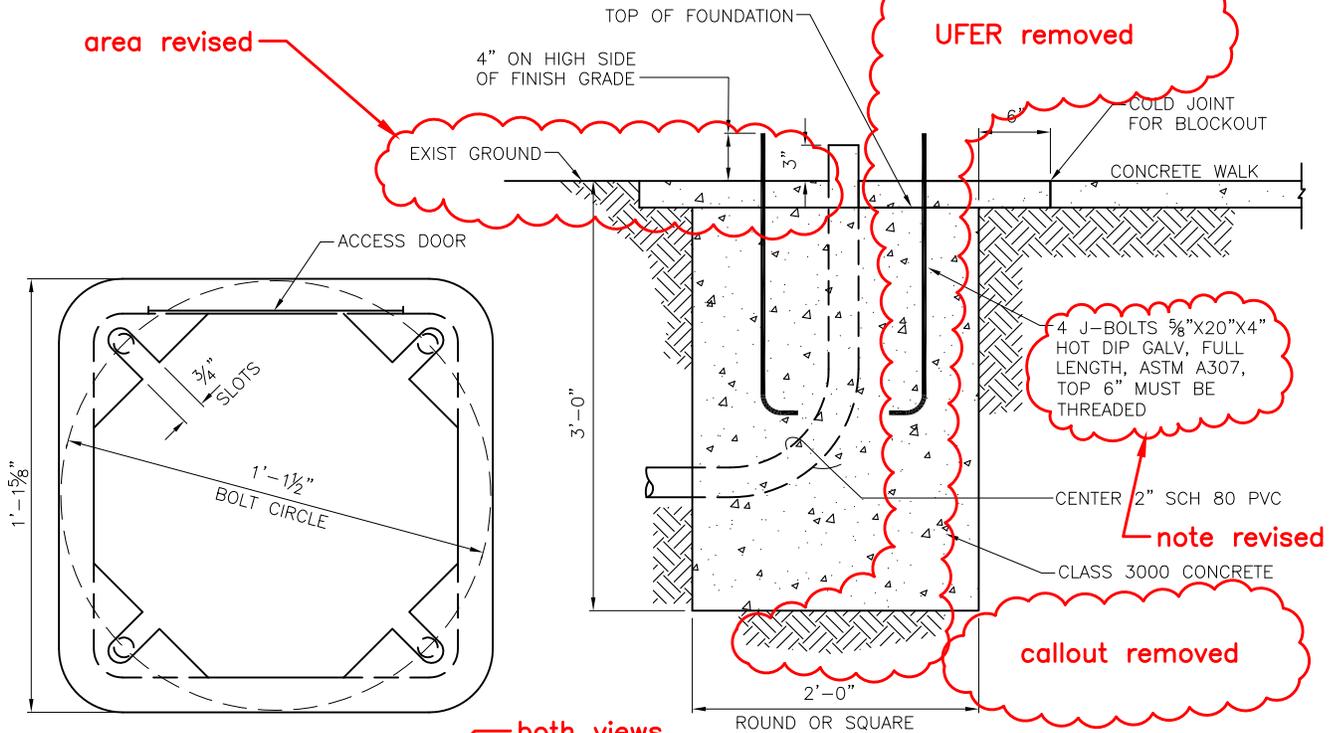
REF STD SPEC SEC 8-31



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NOT TO SCALE

ACCESSIBLE PEDESTRIAN SIGNAL (APS)
PED. PUSHBUTTON ASSEM.

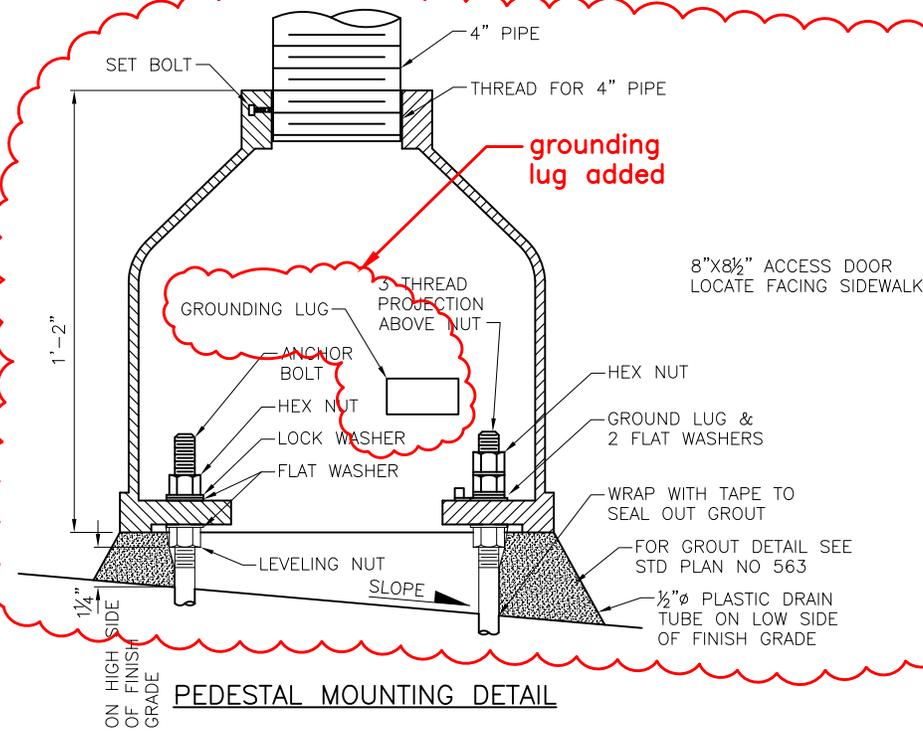


BOTTOM VIEW

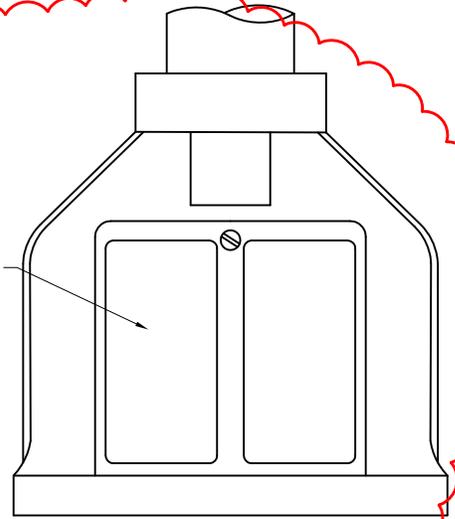
PEDESTAL FOUNDATION

both views redrafted to match

note removed



PEDESTAL MOUNTING DETAIL



SQUARE BASE PEDESTAL

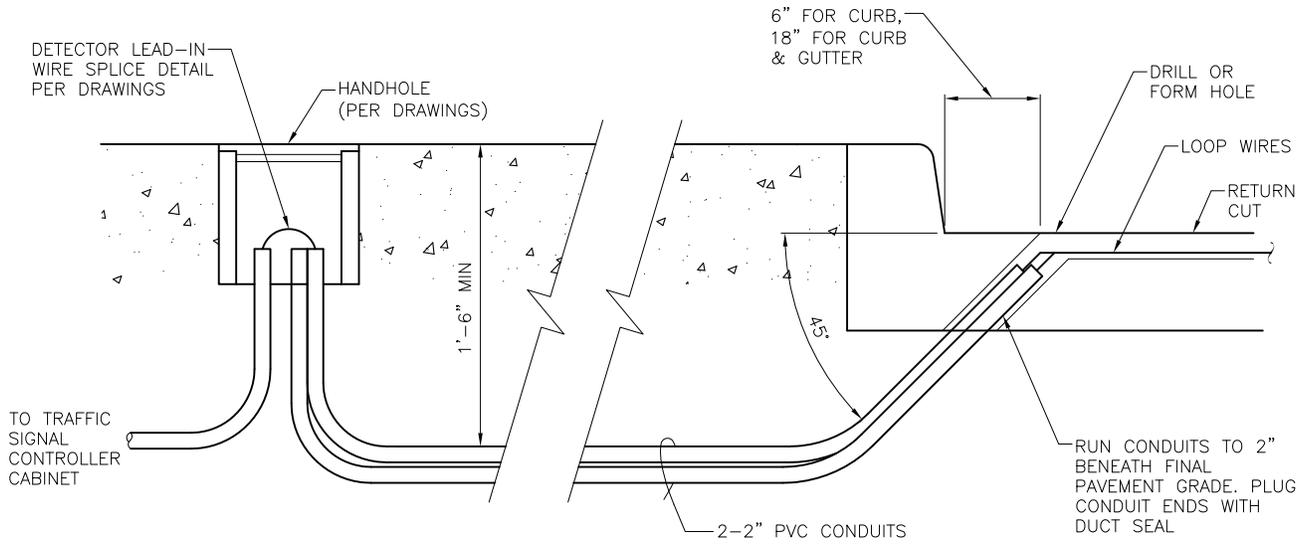
REF STD SPEC SEC 8-32



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NOT TO SCALE

PEDESTAL & FOUNDATION



CURB/PAVEMENT ENTRANCE FOR DETECTOR LOOP WIRES

note 2 revised

NOTES:

1. SHARP EDGE TOOLS MUST NOT BE USED IN PLACING CONDUCTORS IN SAW CUTS
2. EACH PAIR OF LOOP WIRES IN THE RETURN CUT MUST BE TWISTED A MINIMUM OF 3 TURNS PER FOOT AND MAY SHARE COMMON RETURN CUTS WITH OTHER TWISTED PAIRS MAX 3 LOOPS PER CUT.
3. TAPE LOOP WIRE A MINIMUM OF 2 TURNS AT EACH CORNER
4. REMOVE SHARP CORNER EDGES IN SAW CUTS WHERE LOOP WIRE WILL BE BENT AROUND
5. PERFORM RESISTANCE AND CONTINUITY TESTS PRIOR TO SEALING LOOP WIRES
6. COIL 5'-0" OF LOOP WIRE IN HANDHOLE

title changed

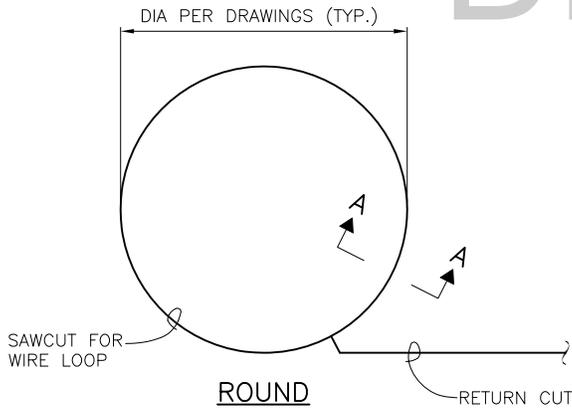
REF STD SPEC SEC 8-31



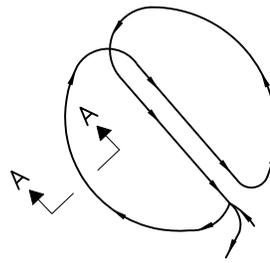
City of Seattle

NOT TO SCALE

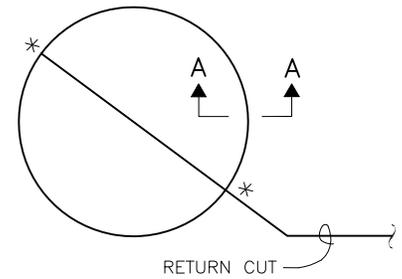
DETECTOR LOOP LEAD-IN



DIPOLE LOOP DETECTOR

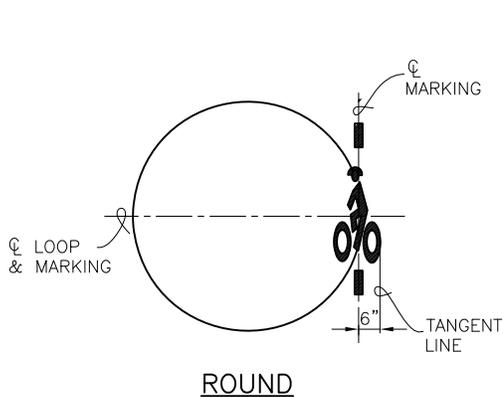


WINDING
DETAIL



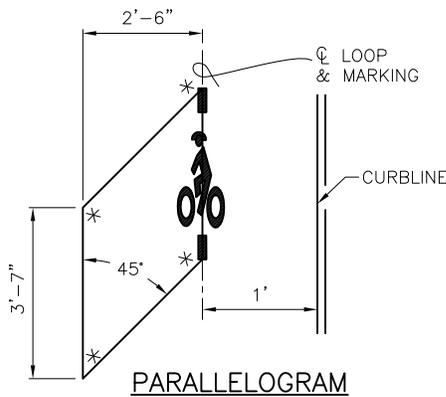
ROUND

QUADRIPOLE LOOP DETECTOR



ROUND

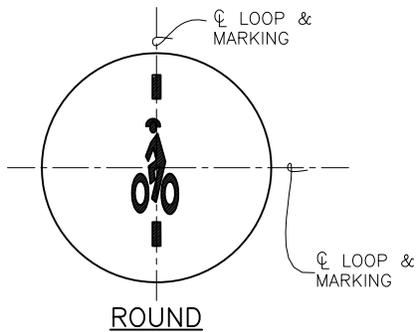
BICYCLE DIPOLE



PARALLELOGRAM

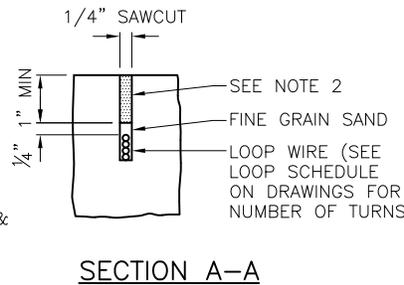
***NOTE:**

OVERLAP CUT FOR FULL DEPTH AT CORNERS (TYP) CHIP 1" BACK THEN ROUND OFF CORNERS WHERE LOOP WIRE WILL BE BENT 90° OR LESS.

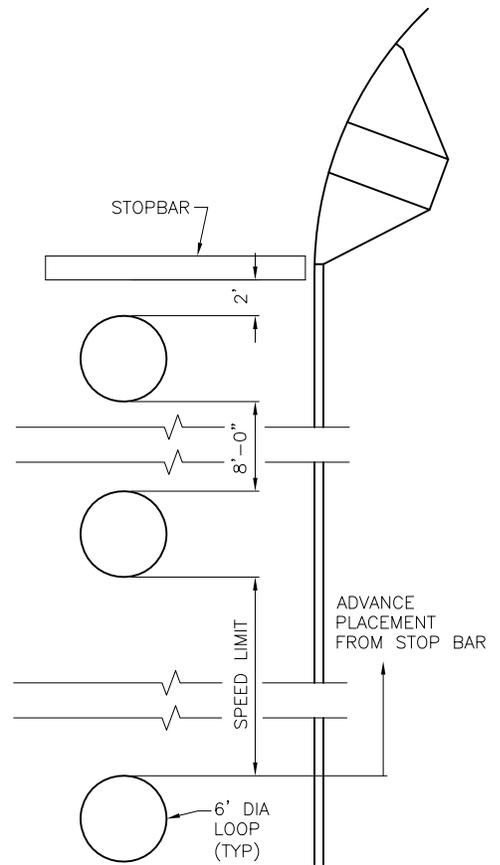


ROUND

BICYCLE QUADRIPOLE



SECTION A-A



STANDARD LOOP SPACING

NOTES:

1. SEE STD PLAN NO. 725 FOR BICYCLE DETECTOR PAVEMENT MARKER DETAIL.
2. FILL CUT AFTER VERTICAL PLACEMENT AND TESTING WITH HOT PAVING GRADE LIQUID ASPHALT ASTM D 312 TYPE III OR QUICK SETTING HIGH STRENGTH GROUT

title revised

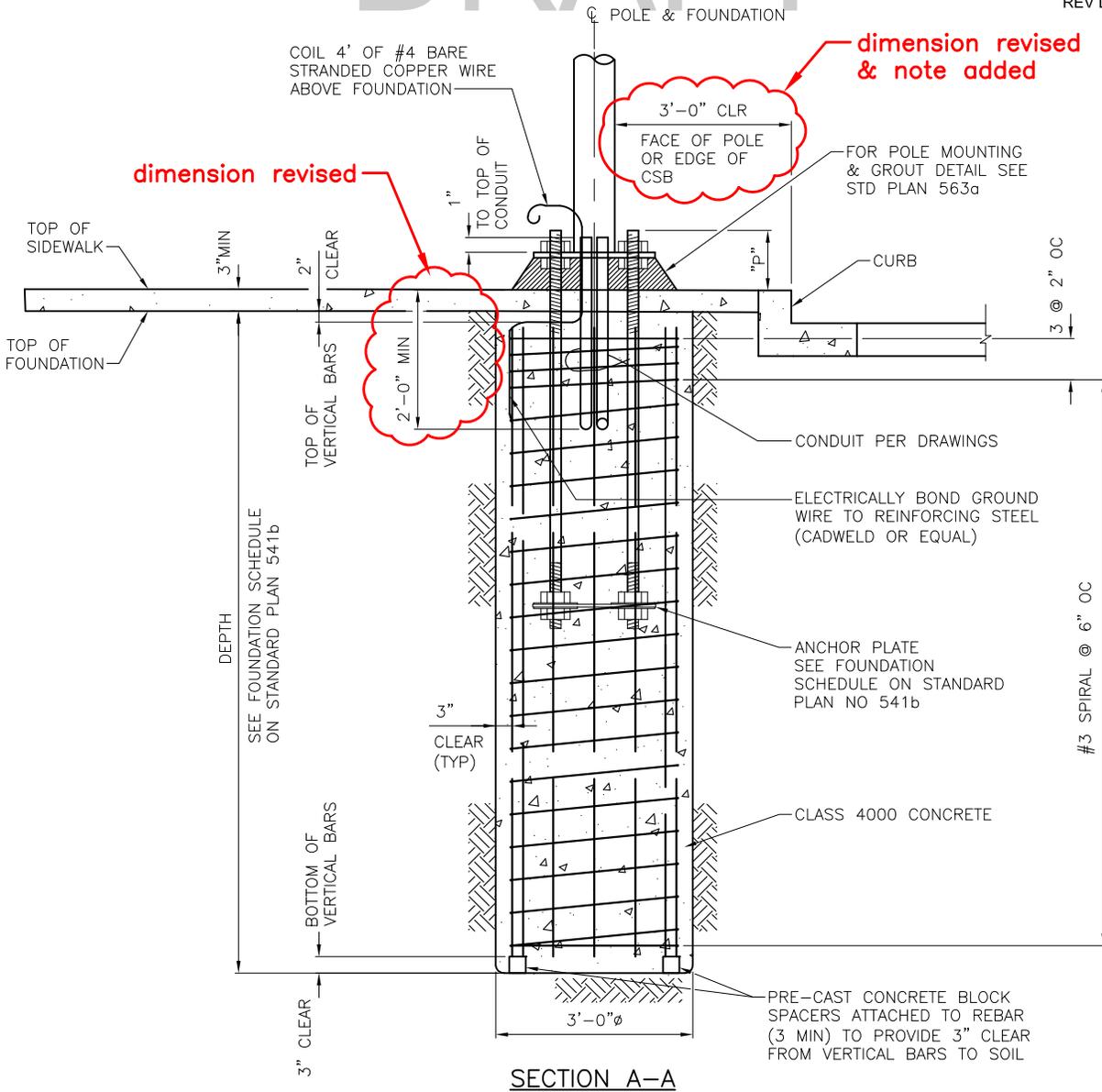
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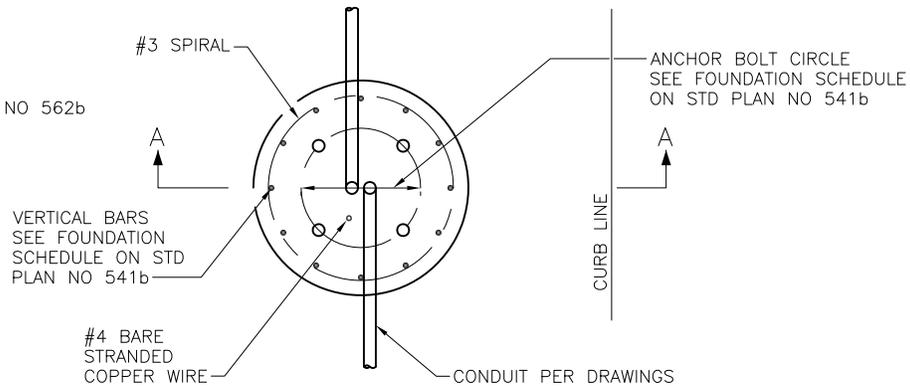
City of Seattle

NOT TO SCALE

DETECTOR LOOP DETAILS



NOTE:
FOR STEEL MAST ARM POLE FOUNDATION SEE STD PLAN NO 562b



PLAN VIEW
STRAIN POLE FOUNDATION IN SIDEWALK

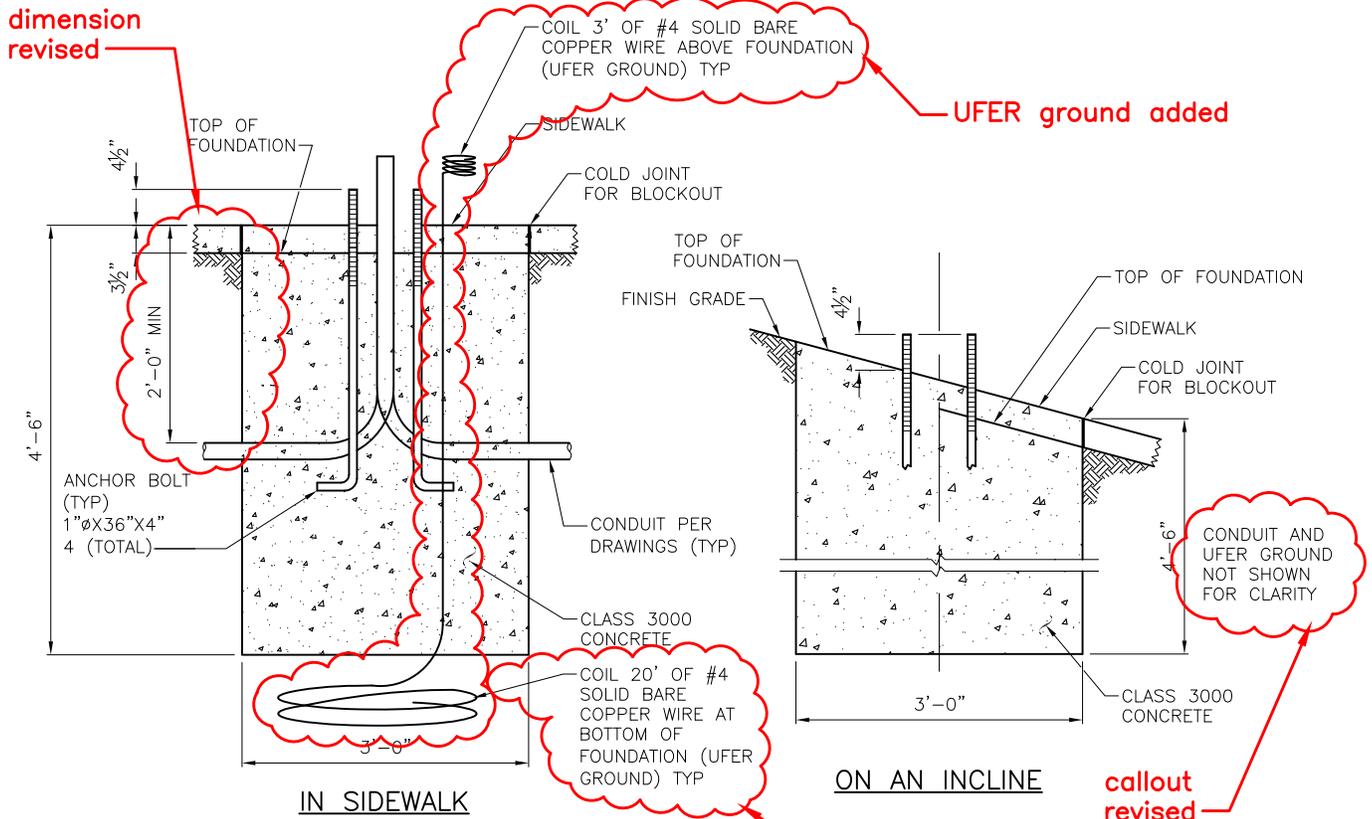
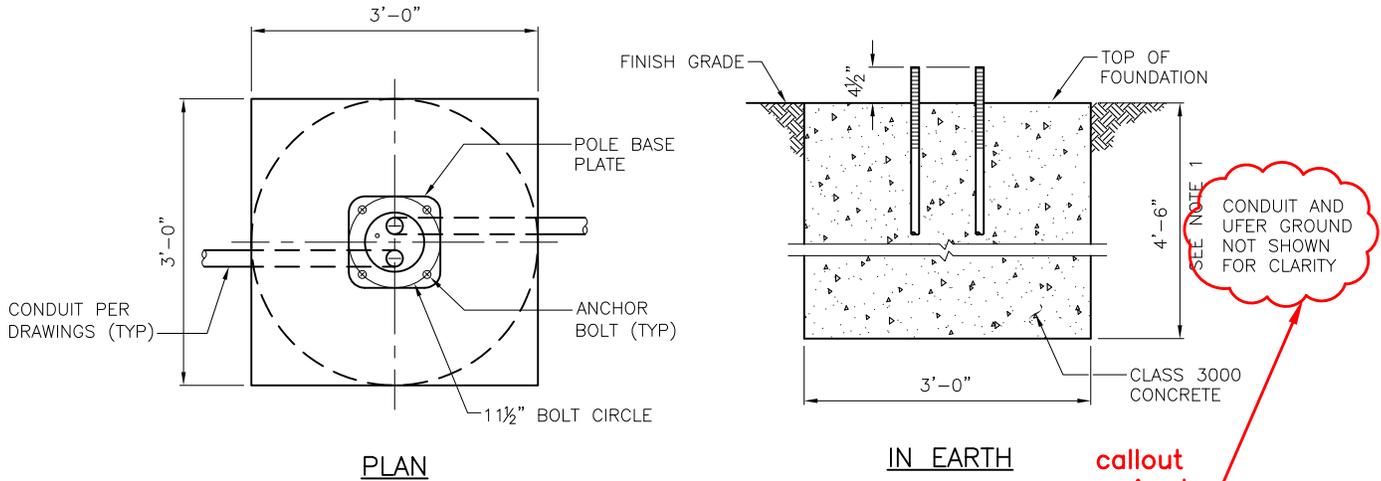
REF STD SPEC SEC 8-32, 6-02



City of Seattle

NOT TO SCALE

STRAIN POLE FOUNDATION DETAIL (TYPE T, V, X & Z)



NOTES:

1. BOLT CIRCLE: 1 1/2" TYP
2. SEE STD PLAN NO 563a FOR POLE MOUNTING AND GROUT DETAIL
3. ANCHOR BOLTS MUST BE HOT DIP GALVANIZED ASTM A153 OR F2329, FULL LENGTH AND FABRICATED FROM ASTM F1554 OR A576 WITH 12" THREADS ON TOP
4. UFER GROUND NOT SHOWN IN ALL DETAILS FOR CLARITY

notes 3 and 4 revised

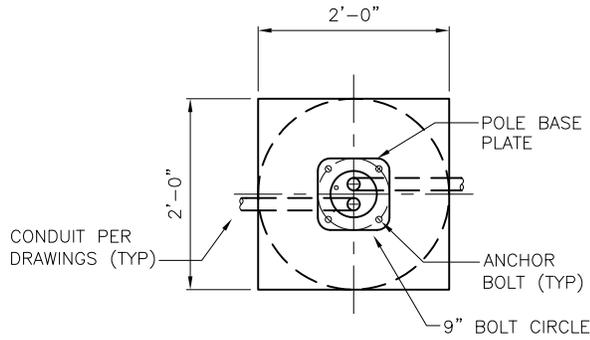
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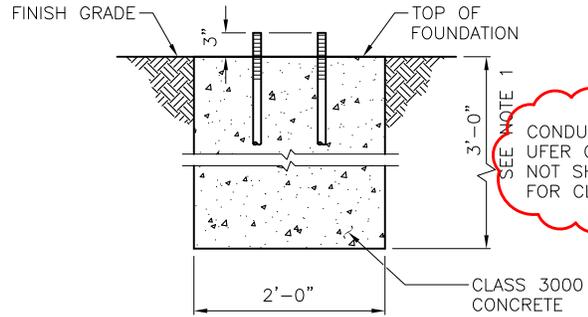
City of Seattle

NOT TO SCALE

STREET LIGHT POLE FOUNDATIONS



PLAN



IN EARTH

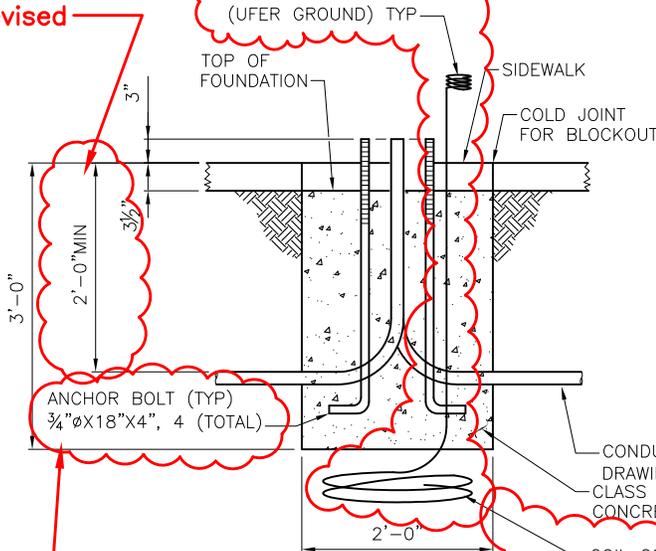
SEE NOTE 1
CONDUIT AND UFER GROUND NOT SHOWN FOR CLARITY

callout revised

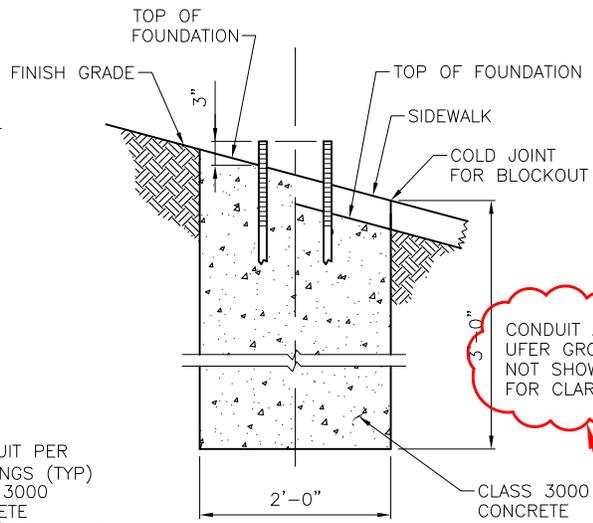
dimension revised

UFER ground added

COIL 3' OF #4 SOLID BARE COPPER WIRE ABOVE FOUNDATION (UFER GROUND) TYP



IN SIDEWALK



ON AN INCLINE

CONDUIT AND UFER GROUND NOT SHOWN FOR CLARITY

callout revised

NOTES:

1. BOLT CIRCLE: 9" TYP
2. SEE STD PLAN NO 563a FOR POLE MOUNTING AND GROUT DETAIL
3. ANCHOR BOLTS MUST BE HOT DIP GALVANIZED TO ASTM A153 OR F2329, FULL LENGTH AND FABRICATED FROM ASTM F1554 OR A576 WITH 8" OF THREADS ON TOP
4. SEE SCL MATERIAL STANDARD 6736.09 FOR POLES
5. SEE SCL CONSTRUCTION STANDARD 1716.07 FOR STREETLIGHT HANDHOLE AND CONDUIT REQUIREMENTS.

callout added

note 3 revised

note 5 added

REF STD SPEC SEC 8-32



City of Seattle

NOT TO SCALE

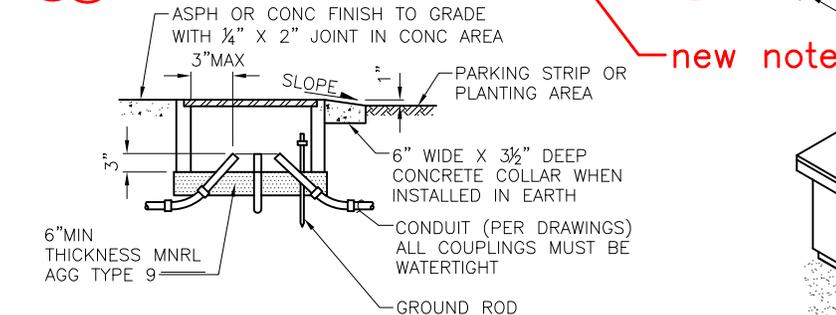
PEDESTRIAN STREET LIGHT POLE FOUNDATIONS

NOTES:

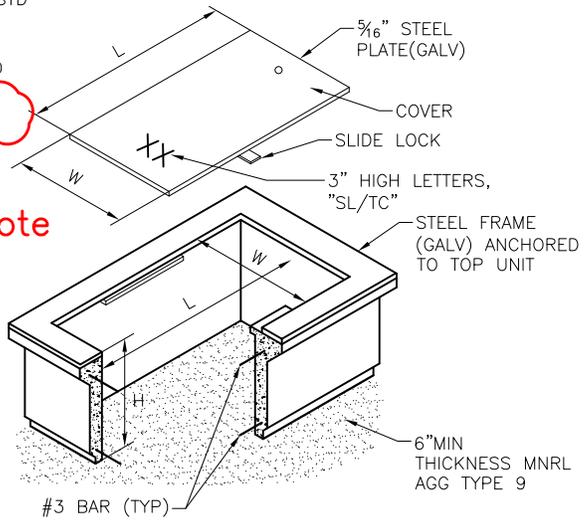
1. THE COVER MUST HAVE $\frac{1}{16}$ " TO $\frac{1}{8}$ " CLEARANCE ON EACH EDGE WITHIN THE FRAME AFTER GALVANIZING.
2. THE GROUND ROD MUST EXTEND 4" ABOVE THE BOTTOM OF THE HANDHOLE OR MINERAL AGGREGATE.
3. TYPE 1, 2, 3, 5 & 6 HANDHOLE COVERS MUST HAVE "TC" AND/OR "SL" ON THEM, AS APPROPRIATE.
4. TYPE 4 HANDHOLE MUST BE INSTALLED IN ROADWAYS, PARKING LOTS, ETC.
5. FOR PAVEMENT DEPTH GREATER THAN 7" USE FRAME EXTENSIONS (SEE STD PLAN NO 231) TO BRING THE COVER UP THE LEVEL OF THE FINISHED PAVEMENT WITHOUT EMBEDDING THE BOTTOM FLANGE OF THE CASTING IN THE PAVEMENT.
6. A 4' LENGTH OF #6 THWN OR THHN COPPER WIRE MUST BE SECURED FROM THE HANDHOLE COVER TO THE FRAME. WITH A 4'-0" LENGTH FROM FRAME THAT CAN BE HOOKED UP TO A GROUND ROD.
7. ALL HANDHOLE COVERS AND FRAMES MUST HAVE A NON-SKID SURFACE (SEE STD SPEC SEC 9-34.6)
8. ALL HANDHOLES MUST HAVE A LOAD RATING OF H20.
9. GROUND ROD REQUIRED IN ALL STREETLIGHT HANDHOLES PER SCL CONSTR STD 1716.50
10. SEE SCL CONSTRUCTION STANDARD 1716.07 FOR STREETLIGHT HANDHOLE AND CONDUIT REQUIREMENTS.

HANDHOLE SCHEDULE

HANDHOLE TYPE	TOP UNIT INSIDE DIMENSION			EXTENSION UNIT(E)	COVER DIMENSIONS	
	L	W	H		L	W
1	19"	14"	12"	12"	18"	13"
2	28"	17"	12"	12"	26 $\frac{1}{2}$ "	17"
3	36"	24"	12"	12"	35"	24"
4	24"Ø	VAR	NA	NA	NA	NA
5	36"	24"	32"	NA	35"	24"
6	42"	42"	38 $\frac{1}{2}$ "	NA	33 $\frac{1}{2}$ "	33 $\frac{3}{4}$ "
GRHH	8"Ø			NA		

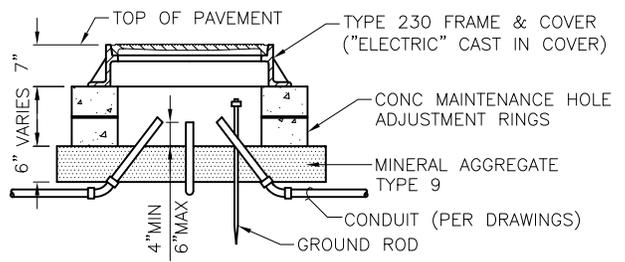
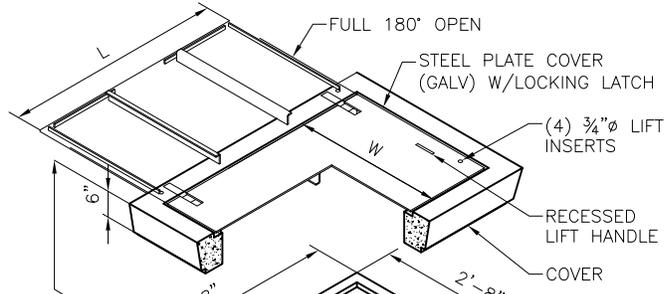


new note

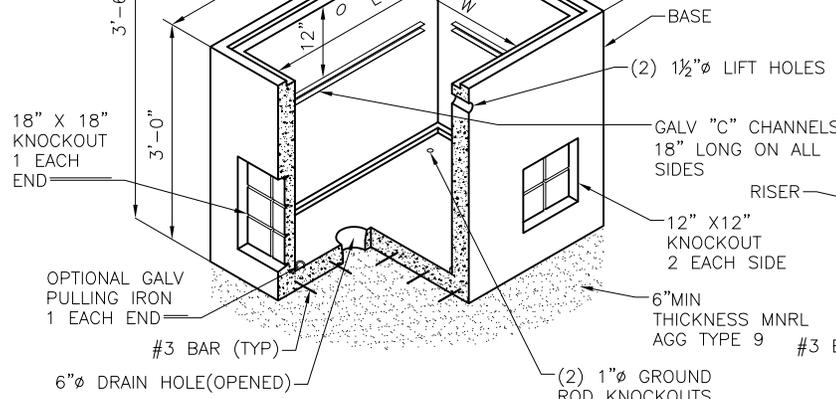


HANDHOLE INSTALLATION DETAIL

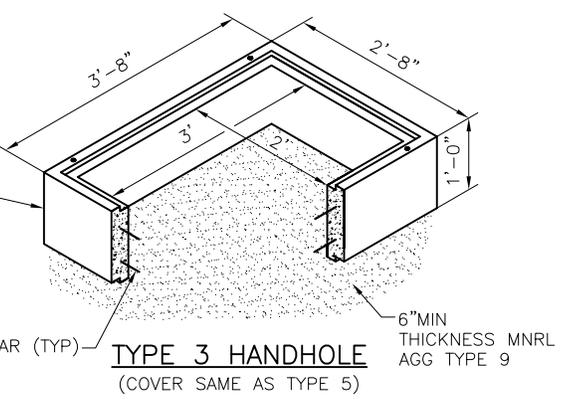
TYPE 1 & 2 HANDHOLE



TYPE 4 HANDHOLE TRAFFIC BEARING



TYPE 5 HANDHOLE



TYPE 3 HANDHOLE (COVER SAME AS TYPE 5)

REF STD SPEC SEC 8-33



City of Seattle

NOT TO SCALE

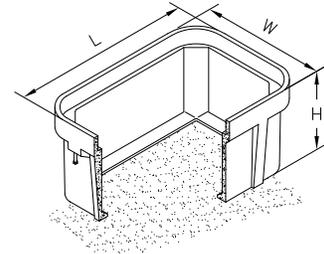
HANDHOLES

NOTES:

1. ALL NON-DELIBERATE TRAFFIC PULL BOX COVERS MUST COMPLY WITH ALL TEST PROVISIONS OF ANSI/SCTE 77 2010 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY", & MUST MEET THE TIER 15 APPLICATION. MARKING SHOWING THE TIER 15 RATING MUST BE EMBOSSED IN THE TOP SURFACE OF THE COVER.
2. ALL NON-DELIBERATE TRAFFIC PULL BOXES MUST COMPLY WITH ALL TEST PROVISIONS OF ANSI/SCTE 77 2012 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY", & MUST MEET THE TIER 22 APPLICATION. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE & OUTSIDE OF THE BOX.
3. ALL NON-DELIBERATE TRAFFIC PULL BOXES & COVERS MUST BE MADE OF POLYMER CONCRETE WITH FIBERGLASS REINFORCEMENT. THE BOX MUST HAVE CONTINUOUS FIBERGLASS CLOTH REINFORCEMENT ON THE INSIDE & OUTSIDE PERIMETERS. THE COVER MUST HAVE A MINIMUM OF TWO LAYERS OF FIBERGLASS CLOTH REINFORCEMENT.
4. ALL NON-DELIBERATE TRAFFIC PULL BOXES & COVERS MUST BE TESTED & CERTIFIED, MEETING ALL TEST PROVISIONS ON THE ANSI/SCTE 77, TO THE 66WF, MEETING ALL TEST PROVISION OF THE LATEST REVISION OF ANSI/SCTE 77.
5. PULL SLOTS MUST BE RATED FOR MINIMUM PULL OUT OF 3,000 POUNDS.
6. TYPE 4 HANDHOLE MUST BE INSTALLED IN ROADWAYS PARKING LOTS, ETC. ALL COVERS MUST BE COMPLETE WITH A MOLDED LOGO, MANUFACTURERS NAME & TIER RATING LOGO (NO GLUE IN LOGO). LOGO MUST READ "TC" AND/OR "SL" UNLESS STATED OTHERWISE BY THE CITY OF SEATTLE.
7. THE GROUND ROD MUST EXTEND 4" ABOVE THE BOTTOM OF THE HANDHOLE OR MINERAL AGGREGATE.
8. FOR PAVEMENT DEPTH GREATER THAN 7" USE FRAME EXTENSIONS (SEE STD PLAN NO 231) TO BRING THE COVER UP THE THE LEVEL OF THE FINISHED PAVEMENT WITHOUT EMBEDDING THE BOTTOM FLANGE OF THE CASTING IN THE PAVEMENT.
9. A 4' LENGTH OF #6 THWN OR THHN COPPER WIRE MUST BE SECURED FROM THE HANDHOLE COVER TO THE FRAME. WITH A 4'-0" LENGTH FROM FRAME THAT CAN BE HOOKED UP TO A GROUND ROD.
10. ALL HANDHOLE COVERS AND FRAMES MUST HAVE A NON-SKID SURFACE (SEE STD SPEC SEC 9-34.6)
11. SEE SCL CONSTRUCTION STANDARD 1716.07 FOR STREET HANDHOLE AND CONDUIT REQUIREMENTS.

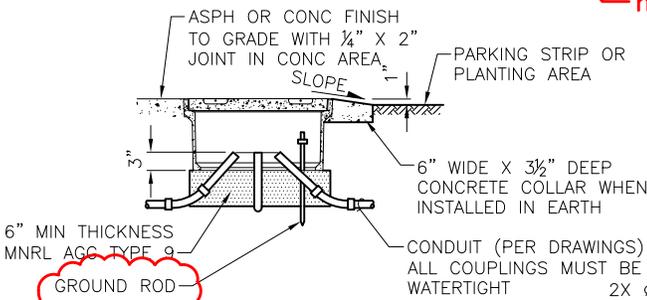
HANDHOLE SCHEDULE

HANDHOLE TYPE	TOP UNIT INSIDE DIMENSION			EXTENSION UNIT(E)	COVER DIMENSIONS	
	L	W	H		L	W
1	24"	13"	12"	12"	24"	13"
2	30"	17"	12"	12"	30"	17"
3	36"	24"	18"	12"	36"	24"
4	24"Ø	VAR	VAR	NA	NA	NA
5	30"	48"	36"	NA	30"	48"
6	48"	48"	48"	NA	48"	48"
GRHH	8"Ø			NA		



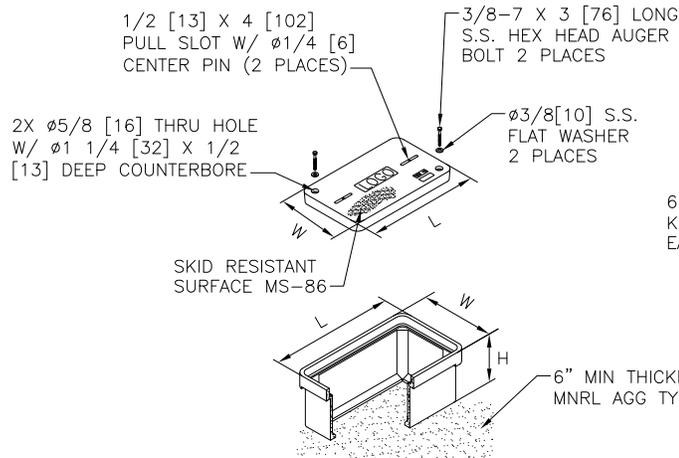
TYPE 3 HANDHOLE
(COVER SAME AS TYPE 5)

note 11 added

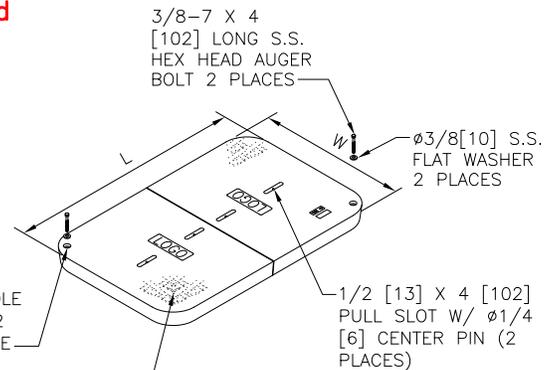


HANDHOLE INSTALLATION DETAIL

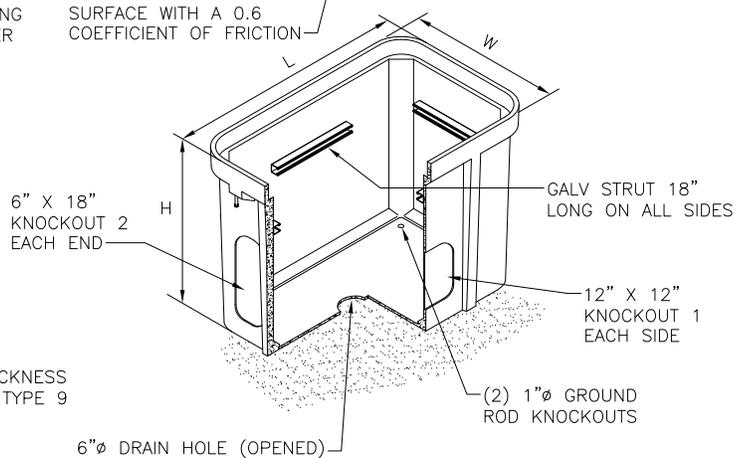
"PER DRAWINGS" removed



TYPE 1 & 2 HANDHOLE



SKID RESISTANT SURFACE WITH A 0.6 COEFFICIENT OF FRICTION



TYPE 5 HANDHOLE

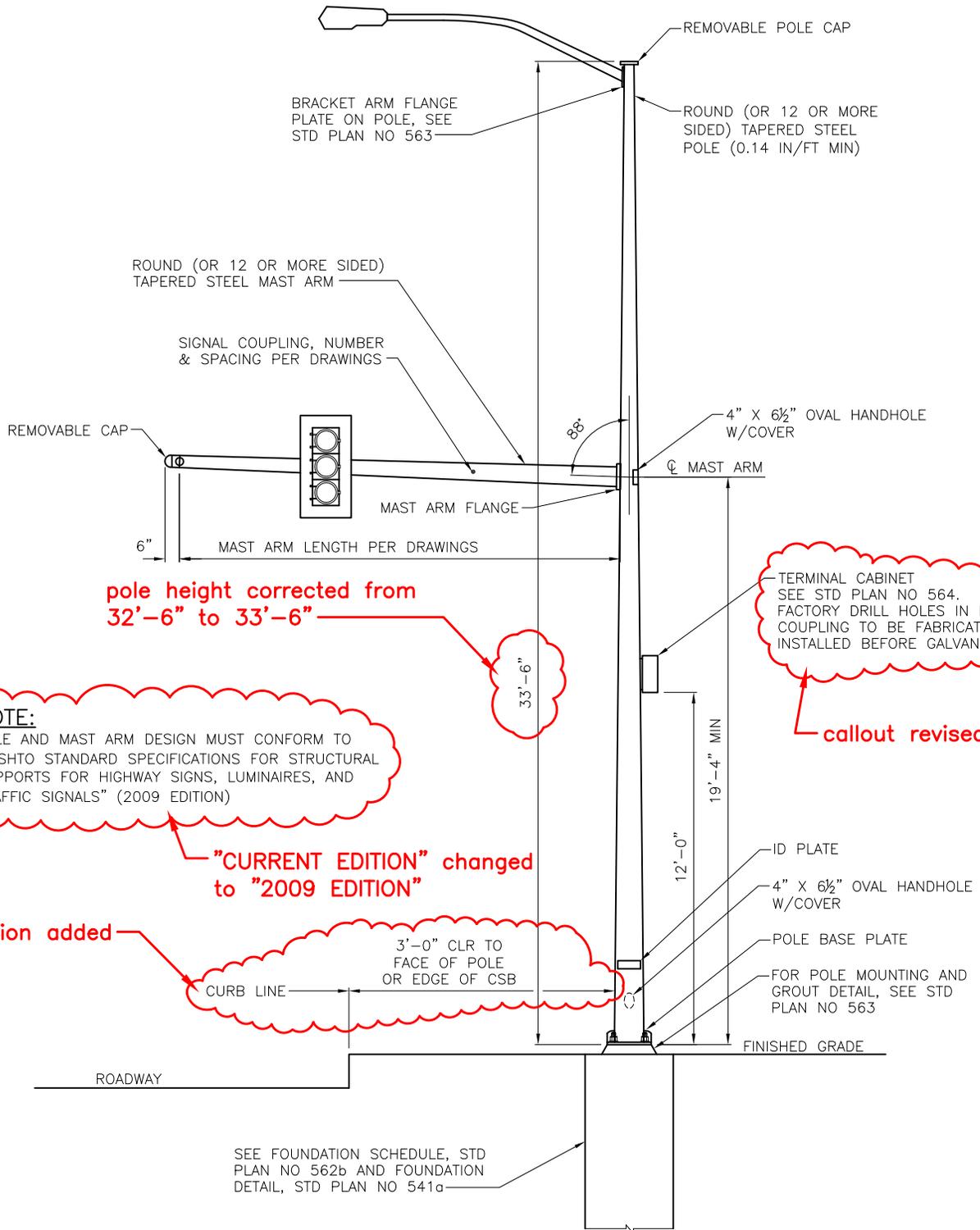
REF STD SPEC SEC 8-33



City of Seattle

NOT TO SCALE

POLYMER CONCRETE HANDHOLES



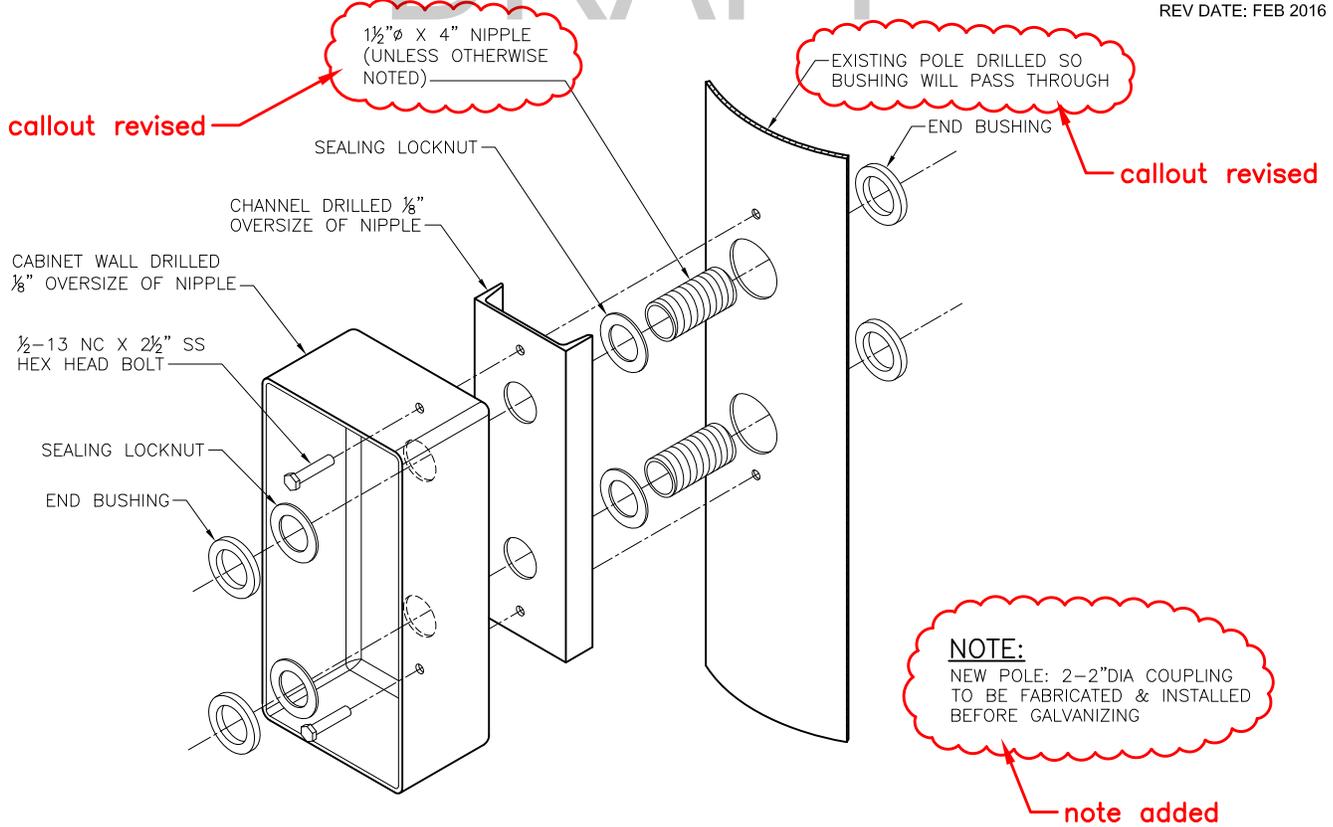
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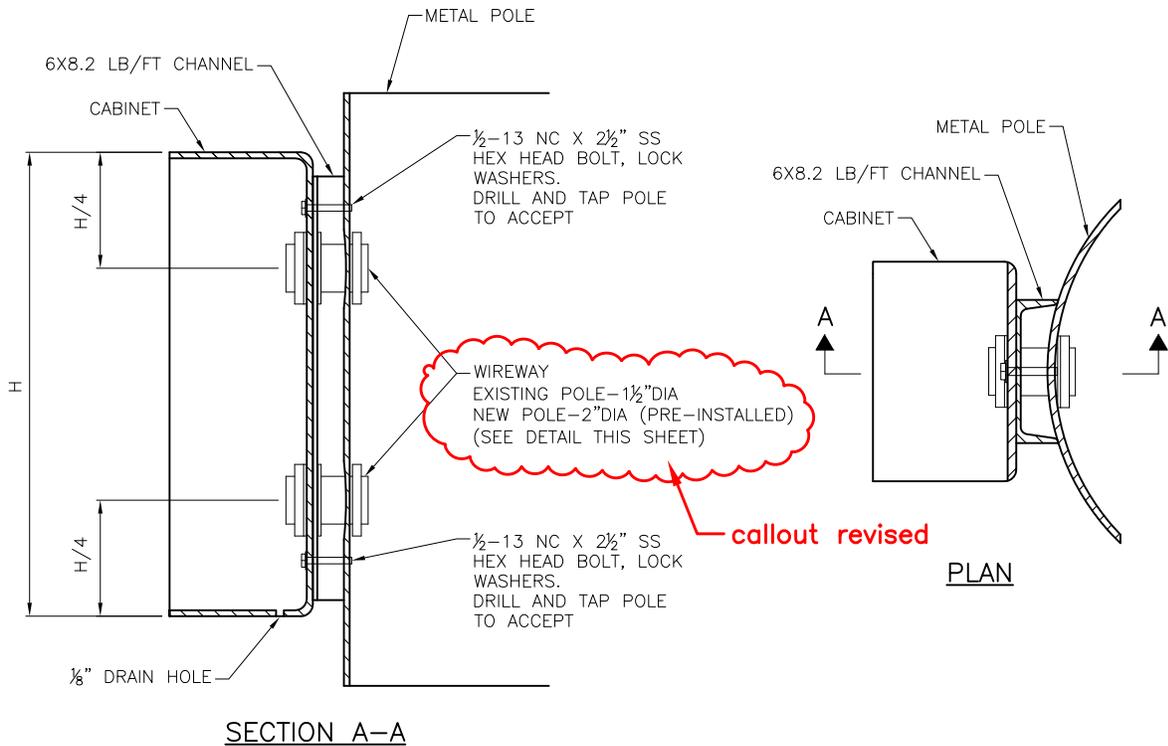
City of Seattle

NOT TO SCALE

STEEL MAST ARM POLE



WIREWAY ISOMETRIC DETAIL



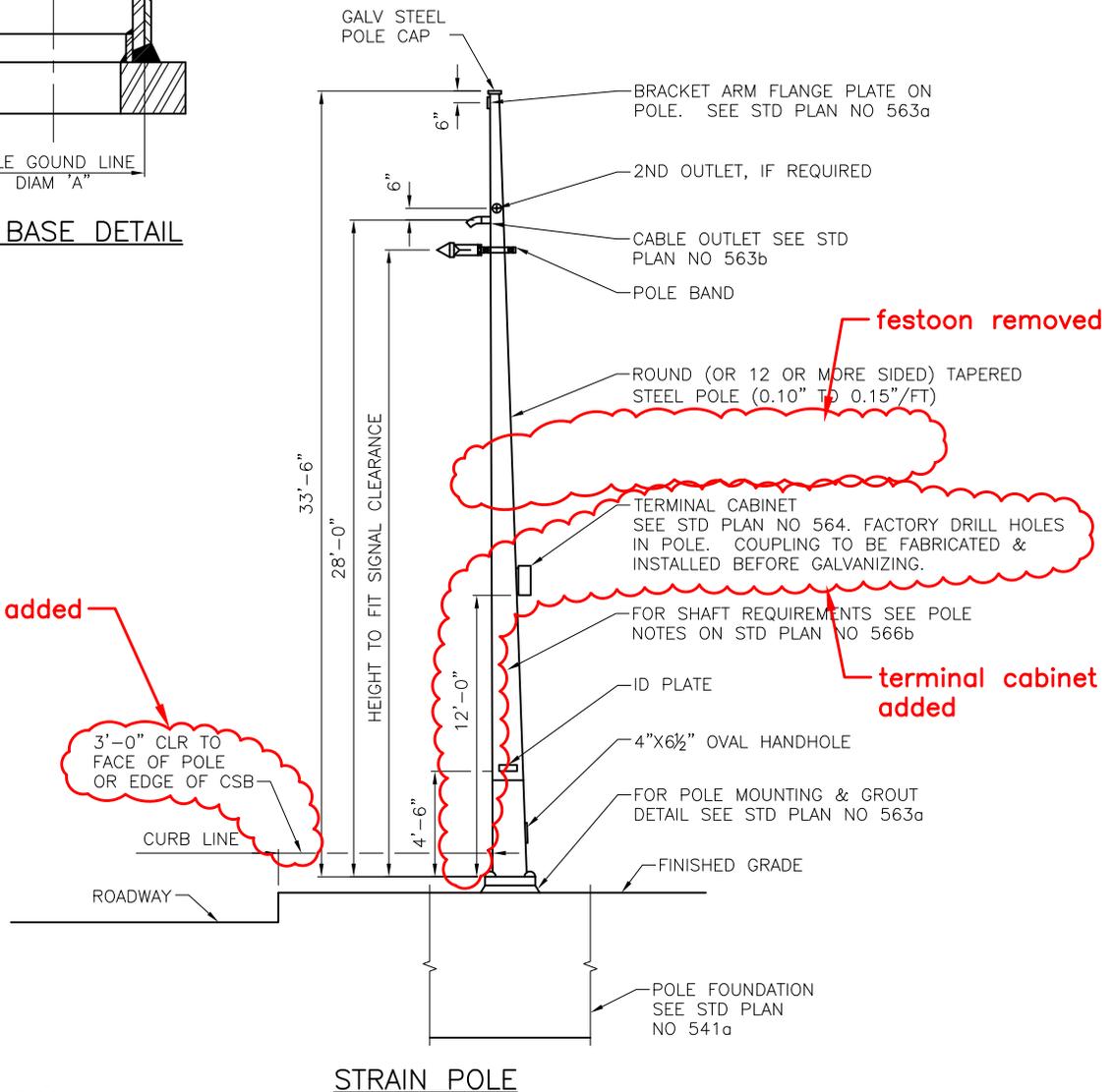
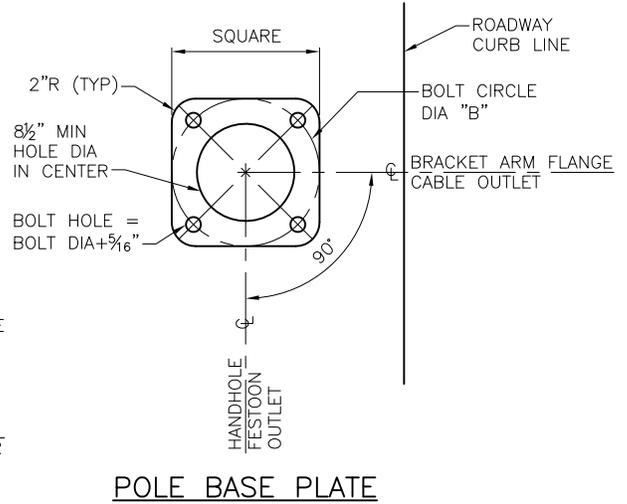
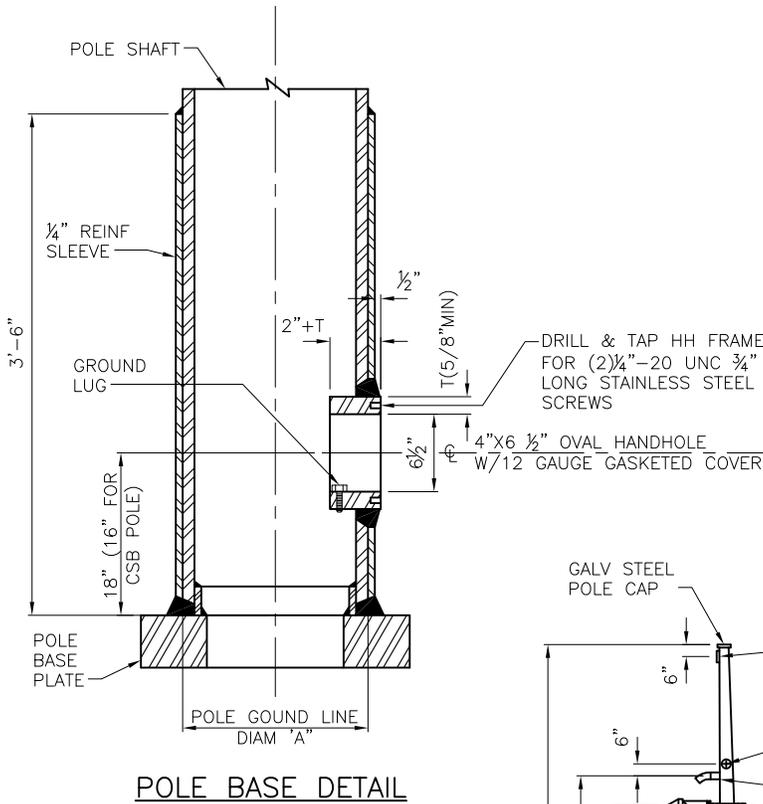
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City of Seattle

NOT TO SCALE

TERMINAL CABINET POLE MOUNTING



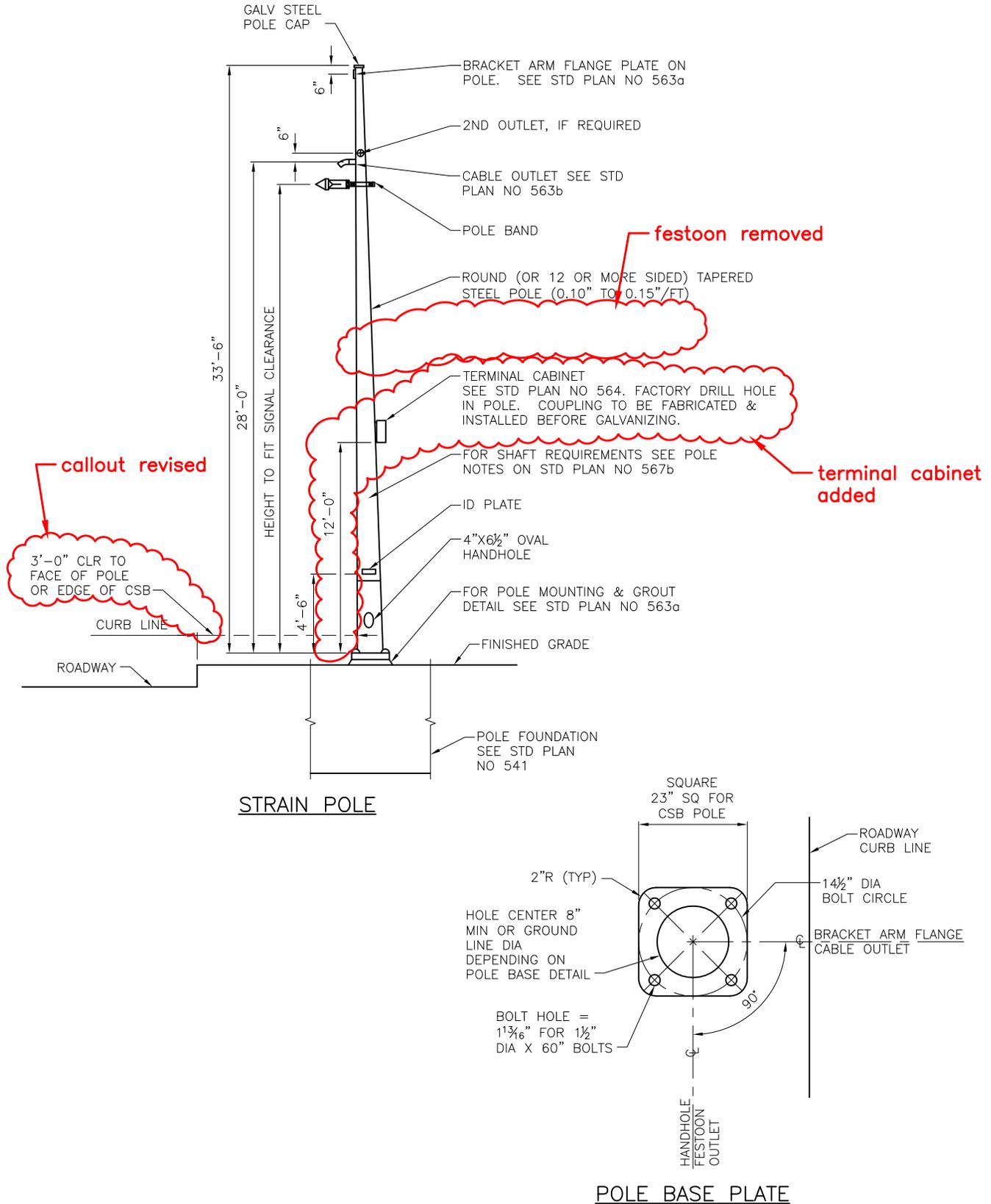
REF STD SPEC SEC 8-32



City of Seattle

NOT TO SCALE

STRAIN POLE DETAILS (TYPE V, X & Z POLES)



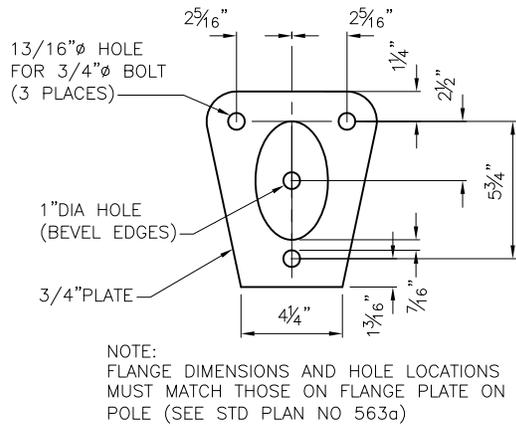
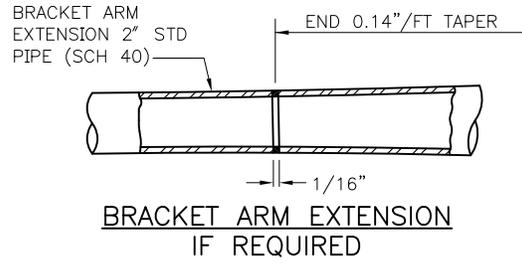
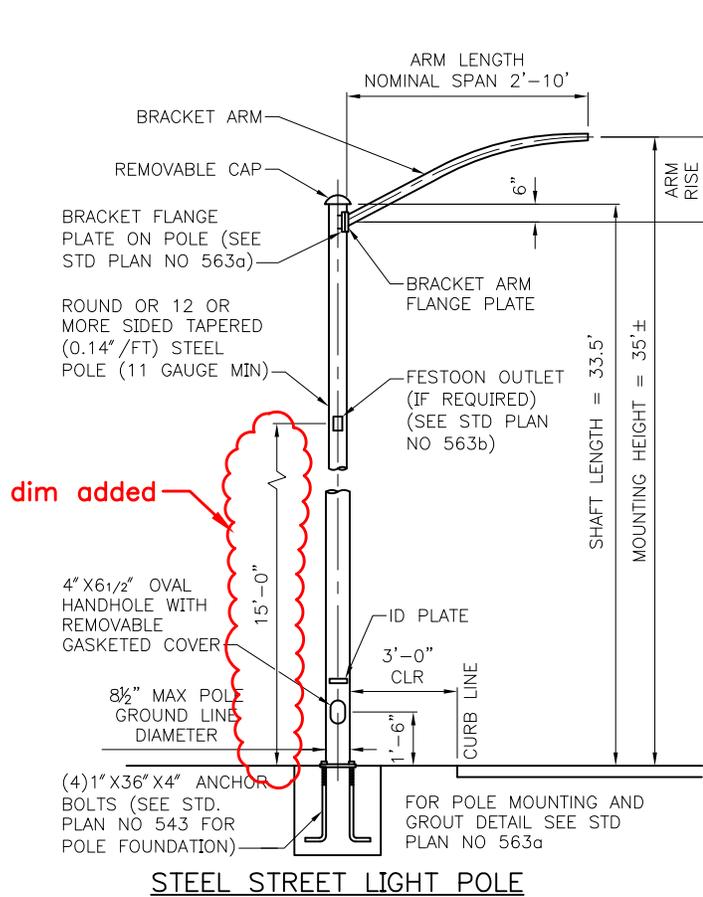
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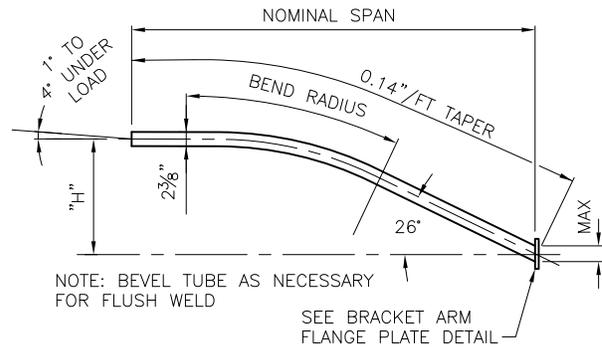
City of Seattle

NOT TO SCALE

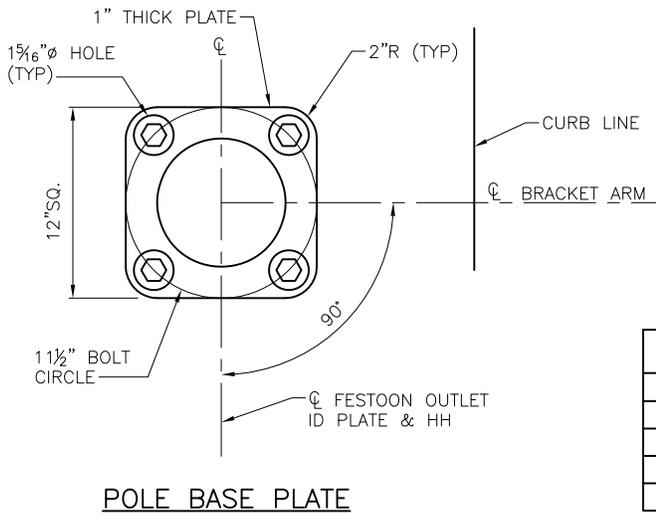
TYPE T STRAIN POLE DETAILS
TRAFFIC SIGNAL ONLY



BRACKET ARM FLANGE PLATE



2' THRU 10' BRACKET ARMS



NOM SPAN	H*	BEND RADIUS	TUBE REQUIREMENT
2'	5 1/4"	-	2" STD PIPE
4'	12"	6'	11 GAUGE
6'	18"	9'	11 GAUGE
8'	24"	13'	11 GAUGE
10'	30"	15'	11 GAUGE

MATERIAL SPECIFICATION
 PLATE AND SHAPES:
 ASTM A36
 POLE SHAFTS:
 ASTM A570
 GR 40 MIN.
 ANCHOR BOLTS:
 ASTM A307
 BRACKET ARM FLANGE PLATE BOLT: ASTM A325

NOTE:

1. ALL OTHER ARM LENGTHS REQUIRE SCL REVIEW AND APPROVAL

* THESE DIMENSIONS ARE ONLY ILLUSTRATIVE OF THE GENERAL OUTLINE AND MATERIALS USED IN THE CONSTRUCTION OF THESE ARMS AND ARE NOT INTENDED TO EXCLUDE MANUFACTURER'S STANDARD PRODUCTS.

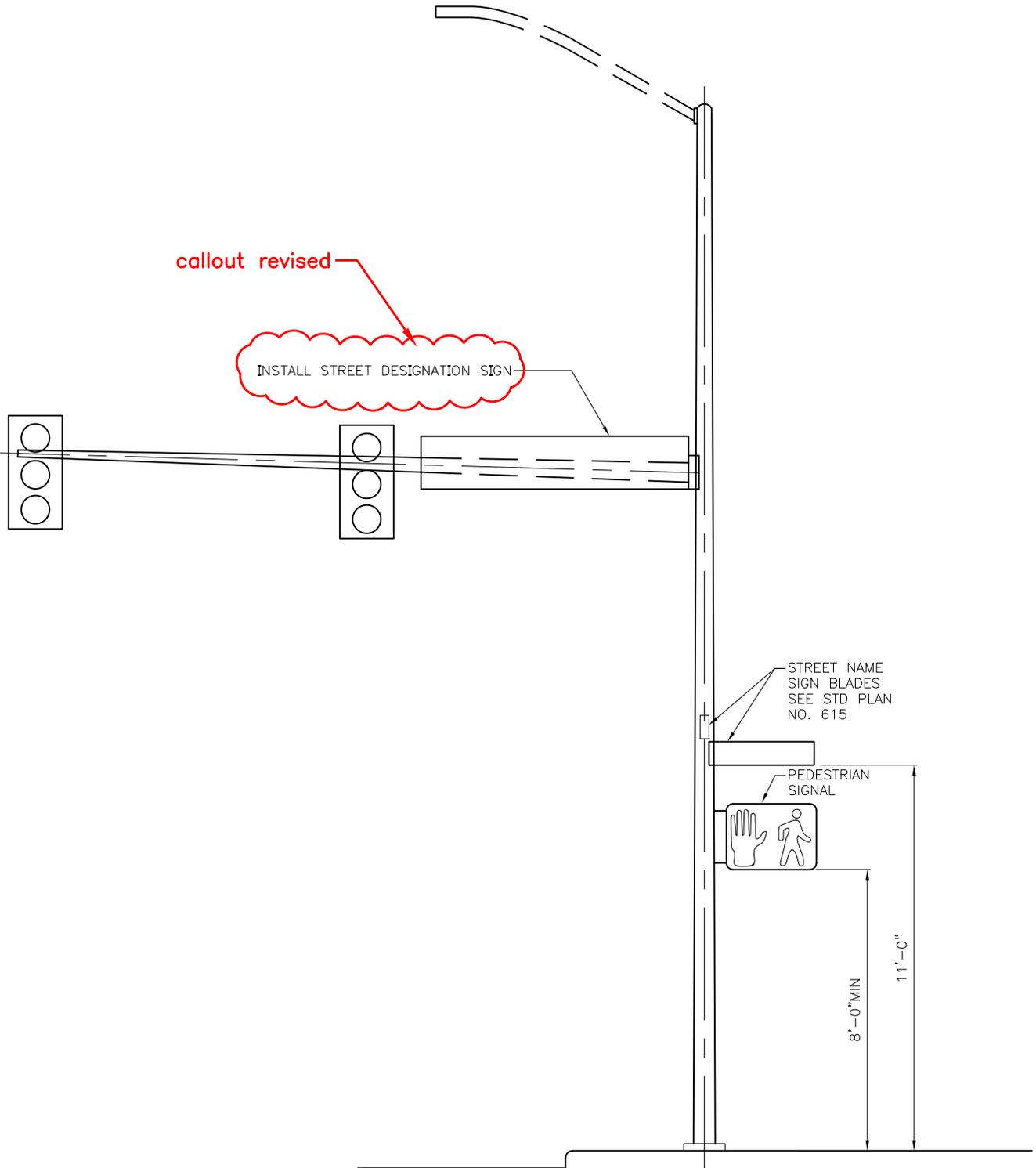
REF STD SPEC SEC 8-32



City of Seattle

NOT TO SCALE

STEEL STREET LIGHT POLE WITH BRACKET ARM



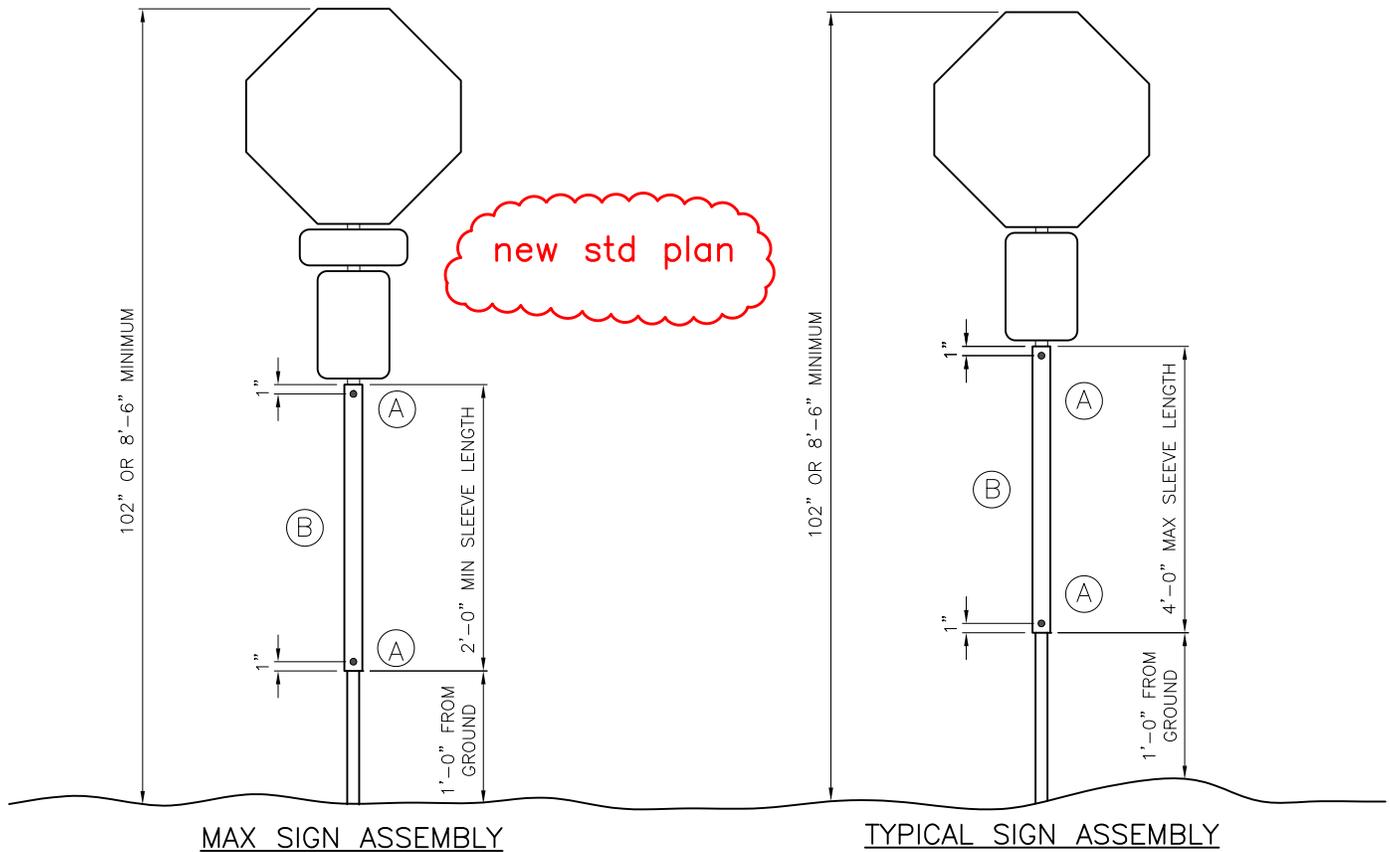
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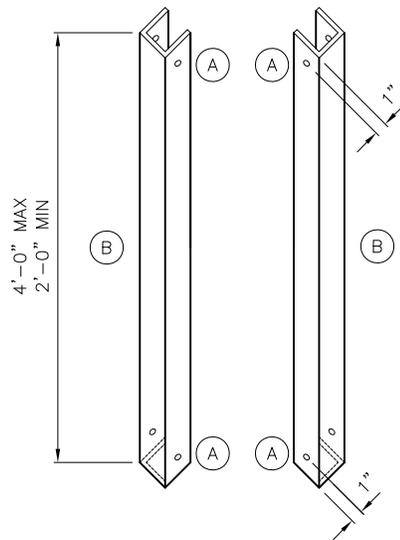
City of Seattle

NOT TO SCALE

STANDARD SIGN INSTALLATION
STEEL POLES



ELEVATIONS



DETAILS

- (A). STEEL SELF-TAPPING #10X1/2" WITH HEX WASHER HEAD ZINC PLATED
- (B). FLOURESCENT YELLOW GREEN OR RED AND WHITE SLEEVE

REF STD SPEC SEC

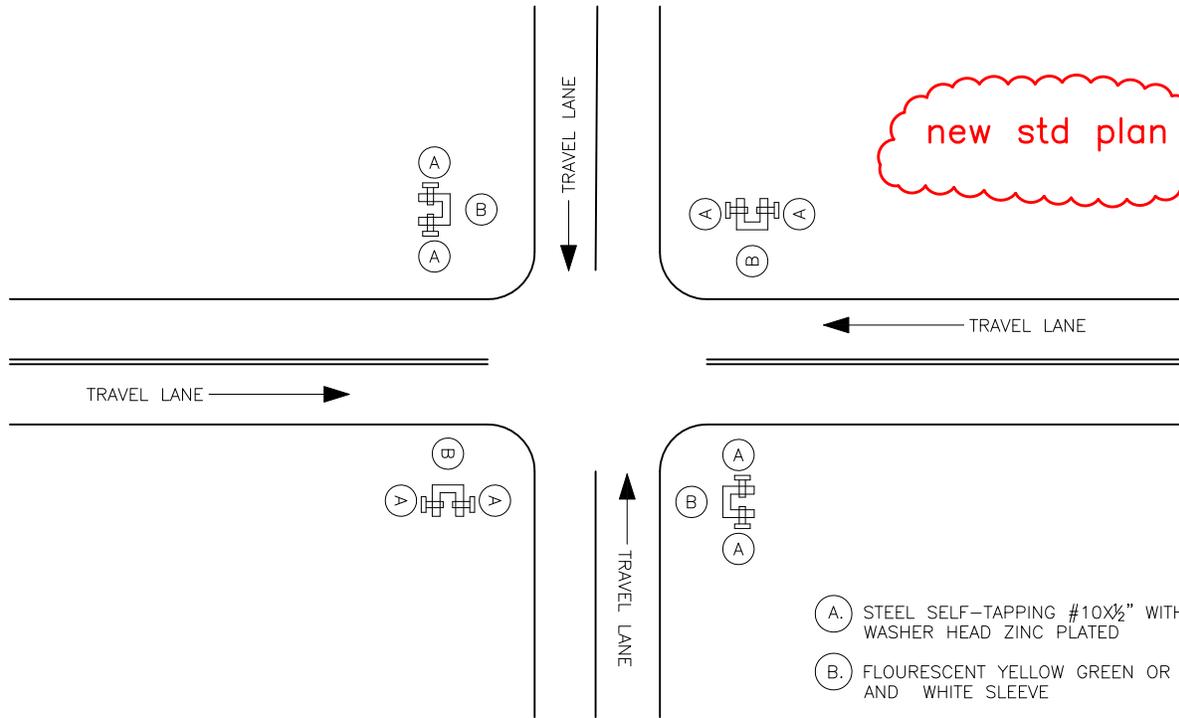


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NOT TO SCALE

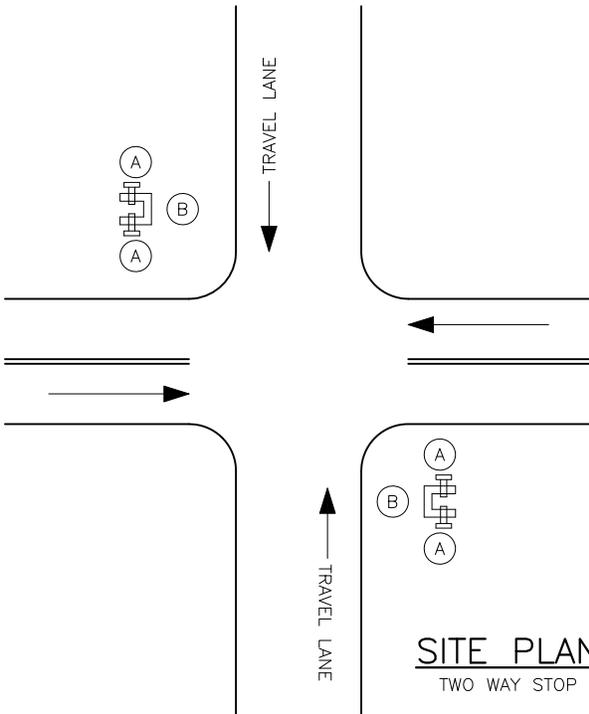
POST SLEEVE INSTALLATION
ELEVATION AND DETAIL PLAN

new std plan

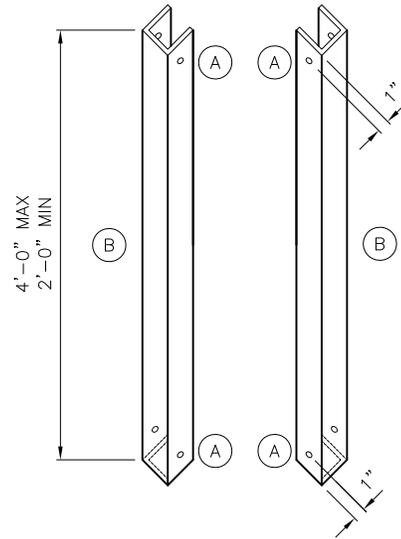


SITE PLAN
ALL WAY STOP

- (A) STEEL SELF-TAPPING #10X $\frac{1}{2}$ " WITH HEX WASHER HEAD ZINC PLATED
- (B) FLOURESCENT YELLOW GREEN OR RED AND WHITE SLEEVE



SITE PLAN
TWO WAY STOP



DETAILS

REF STD SPEC SEC

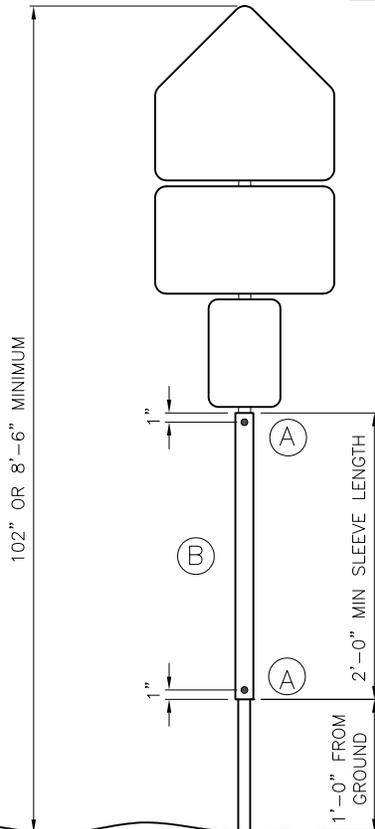


City of Seattle

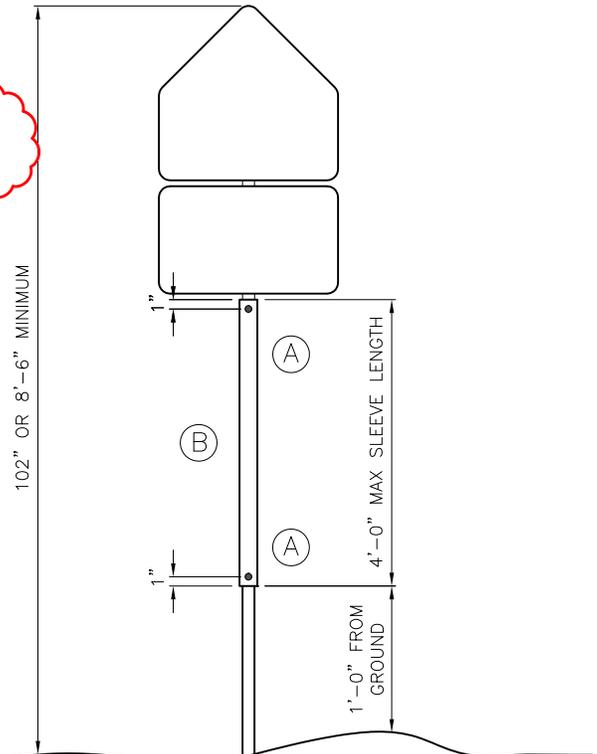
NOT TO SCALE

POST SLEEVE INSTALLATION
DETAIL AND SITE PLAN

new std plan



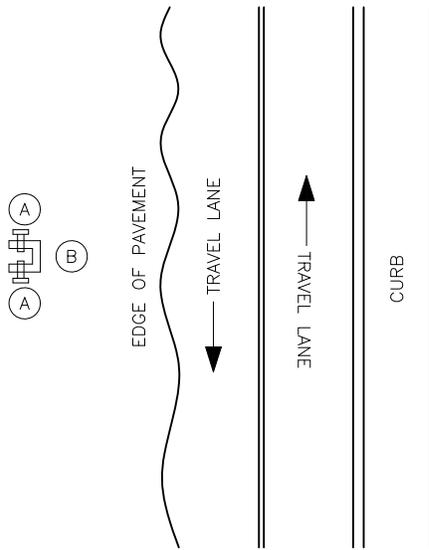
MAX SIGN ASSEMBLY



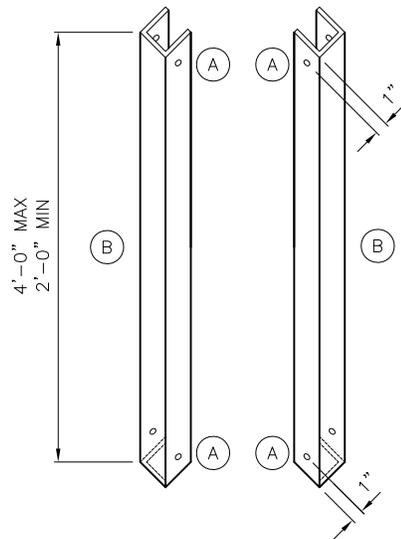
TYPICAL SIGN ASSEMBLY

ELEVATIONS

- (A) STEEL SELF-TAPPING #10X $\frac{1}{2}$ " WITH HEX WASHER HEAD ZINC PLATED
- (B) FLOURESCENT YELLOW GREEN OR RED AND WHITE SLEEVE



SITE PLAN



DETAILS

REF STD SPEC SEC



City of Seattle

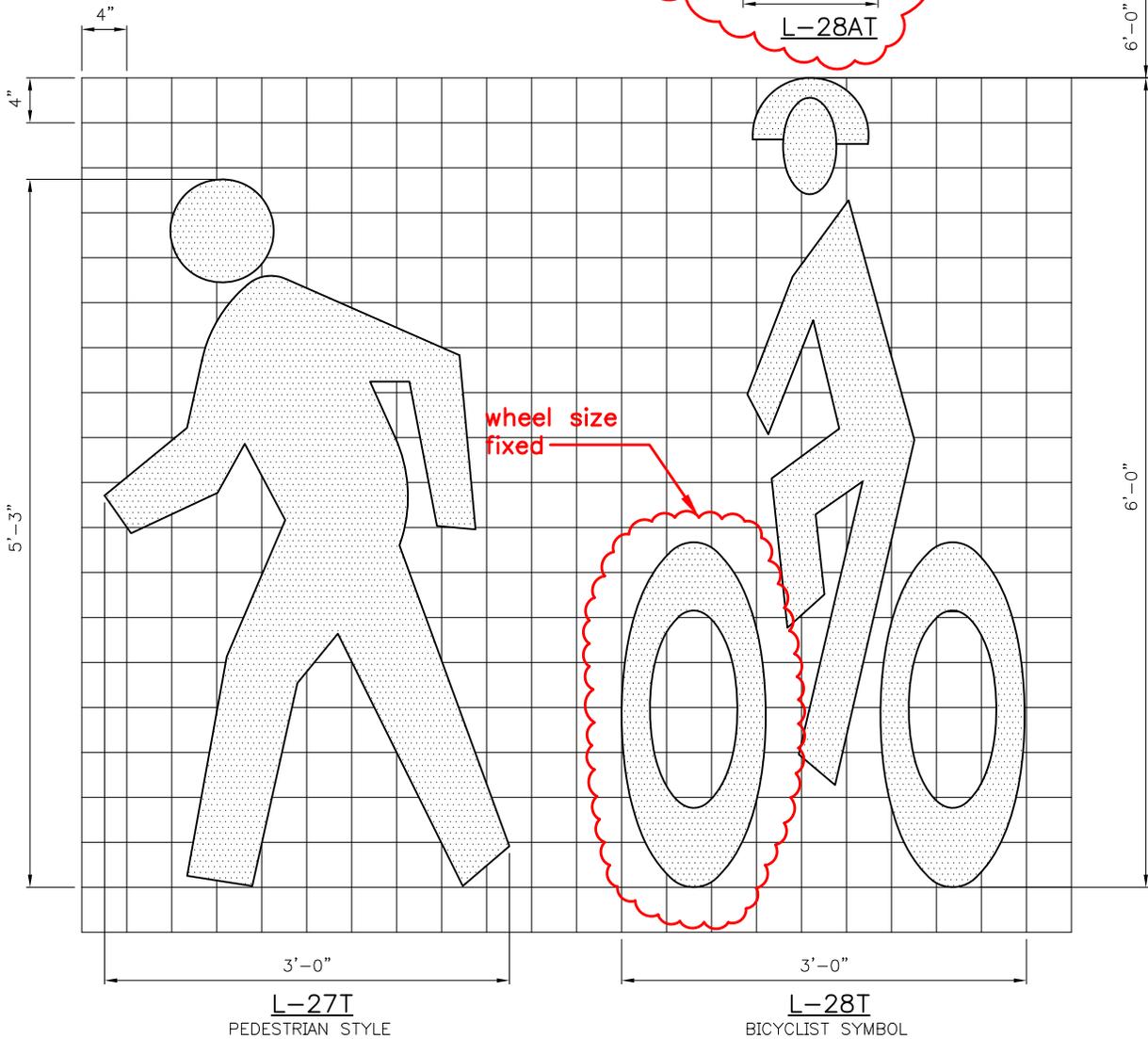
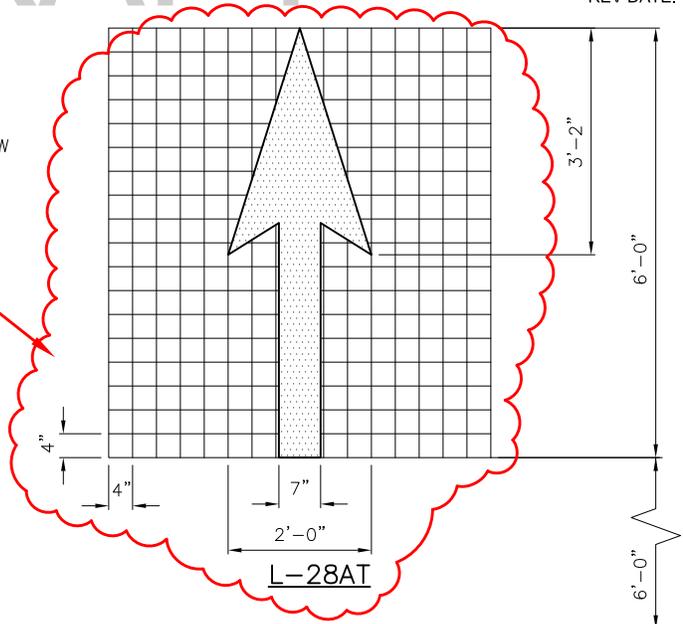
NOT TO SCALE

POST SLEEVE INSTALLATION
ELEVATION AND SITE PLAN

NOTES:

- 1. "T" = THERMOPLASTIC
- 2. L-28AT INCLUDES BICYCLE SYMBOL AND ARROW

arrow revised



L-27T
PEDESTRIAN STYLE

L-28T
BICYCLIST SYMBOL
(INCLUDES L-28A, LT-28AT)
(SEE NOTE 2)

REF STD SPEC SEC 8-22



City of Seattle

NOT TO SCALE

**BICYCLIST & PEDESTRIAN
SYMBOLS**