

* SEE RIGHT OF WAY IMPROVEMENT MANUAL FOR DIMENSIONS.
 ** UNLESS OTHERWISE APPROVED BY THE ENGINEER.
 *** MAXIMUM 2%, MINIMUM 0.5%; USE 2% UNLESS OTHERWISE SHOWN IN CONTRACT OR APPROVED BY THE ENGINEER.

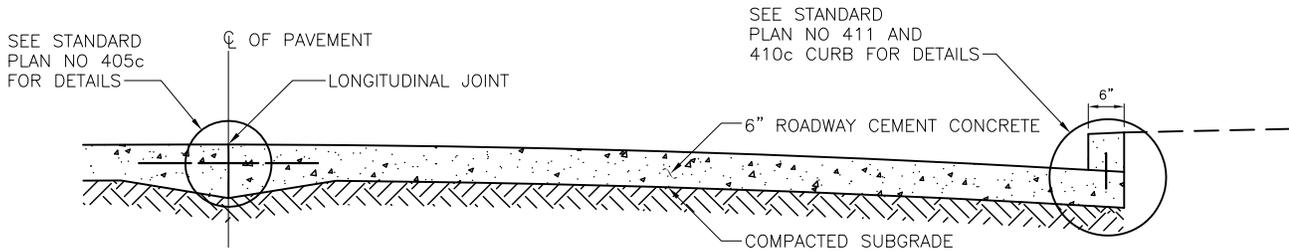
REF STD SPEC SEC 2-04



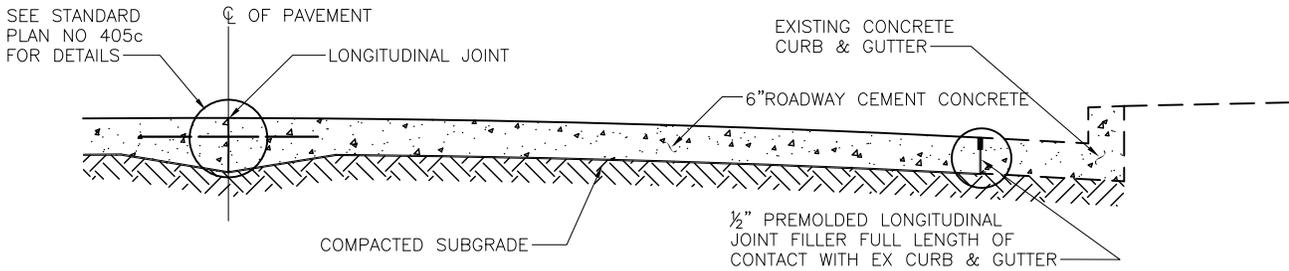
City of Seattle

NOT TO SCALE

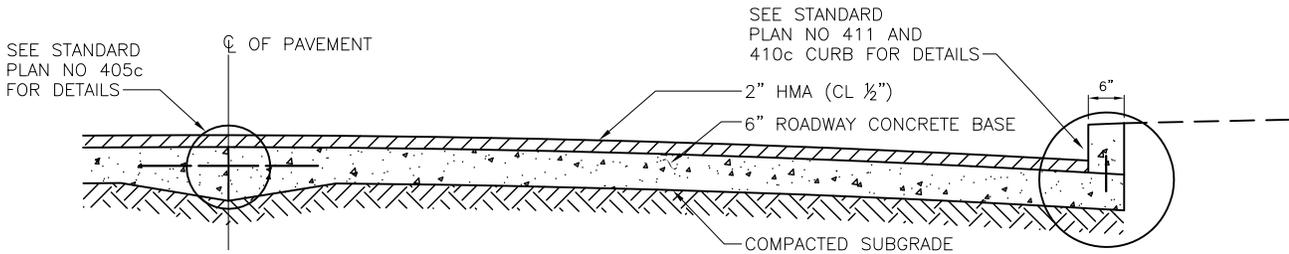
HALF SECTION, GRADING



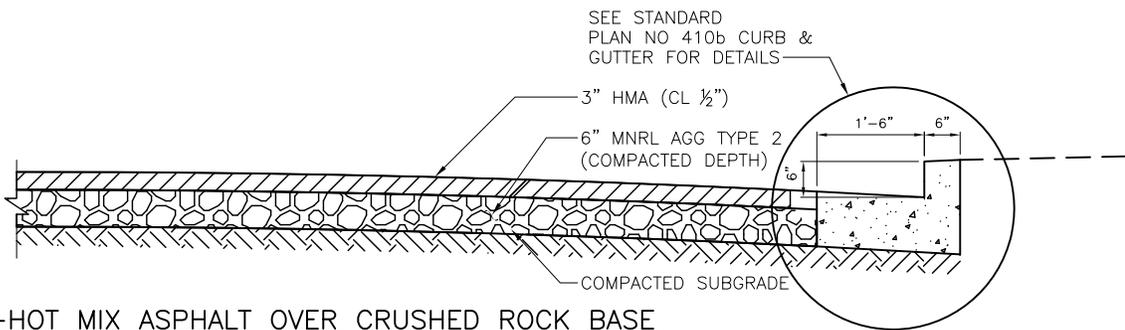
401A-CEMENT CONCRETE PAVEMENT WITH INTEGRAL CURB



401B-CEMENT CONCRETE PAVEMENT WITH EXISTING CURB & GUTTER



401C-HOT MIX ASPHALT ON CEMENT CONCRETE BASE



401D-HOT MIX ASPHALT OVER CRUSHED ROCK BASE

HMA DESIGN CRITERIA:

1. 3 MILLION ESAL'S UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS
2. ASPHALT PG 64-22 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS
3. WARM MIX ASPHALT MAY BE USED IN PLACE OF HMA WHERE SHOWN ON THE DRAWINGS

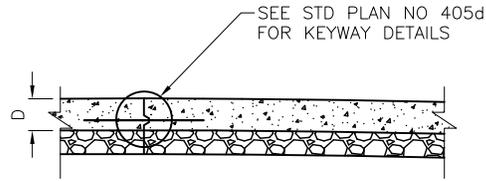
REF STD SPEC SEC 4-04, 5-04, 5-05, 8-04



City of Seattle

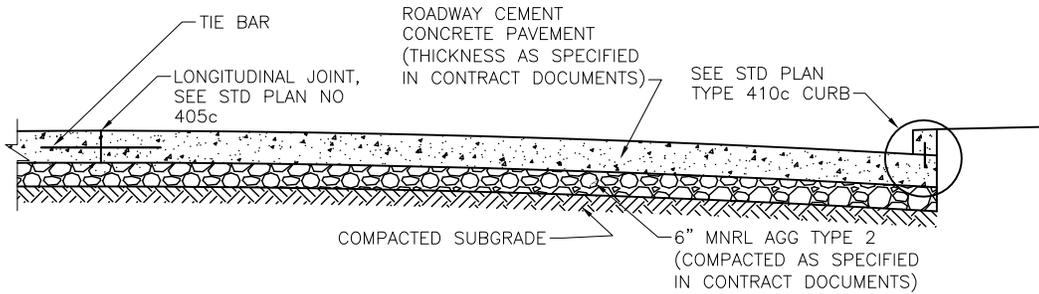
NOT TO SCALE

**RESIDENTIAL PAVEMENT
SECTIONS**

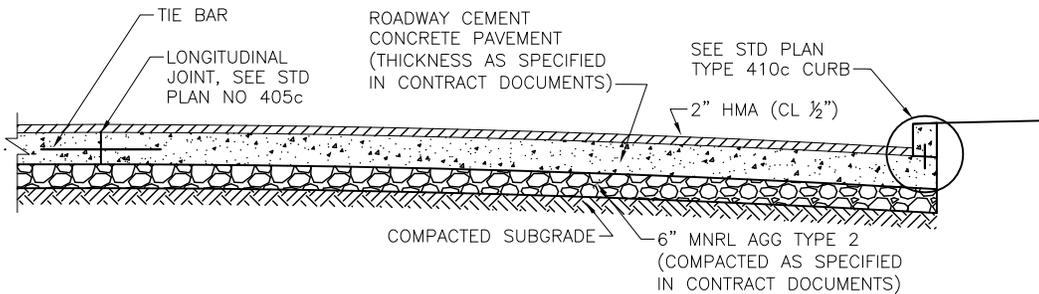


NOTES:
 IF CONC THICKNESS IS 9 INCH OR GREATER
 OPTIONAL KEYWAY MAY BE USED
 SEE STD PLANS NO 405c & 405d FOR DETAILS

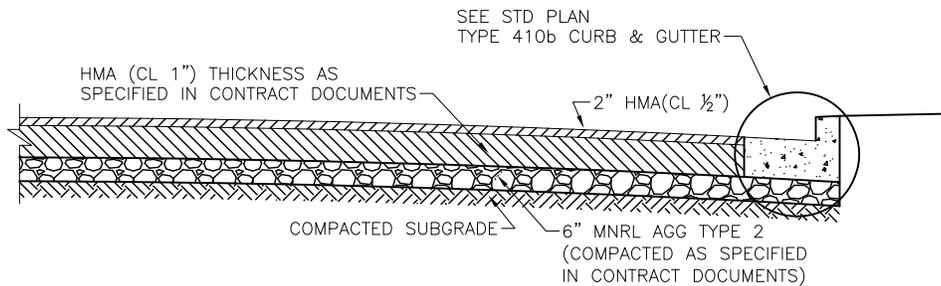
OPTIONAL KEYWAY
 FOR LONGITUDINAL JOINT



402A—ROADWAY CEMENT CONCRETE PAVEMENT ON CRUSHED ROCK



402B—HOT MIX ASPHALT ON CEMENT CONCRETE ON CRUSHED ROCK



402C—HOT MIX ASPHALT ON CRUSHED ROCK BASE

HMA DESIGN CRITERIA:

1. 10 MILLION ESAL'S UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
2. ASPHALT PG 64-22 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
3. WARM MIX ASPHALT MAY BE USED IN PLACE OF HMA WHERE SHOWN ON THE DRAWINGS.

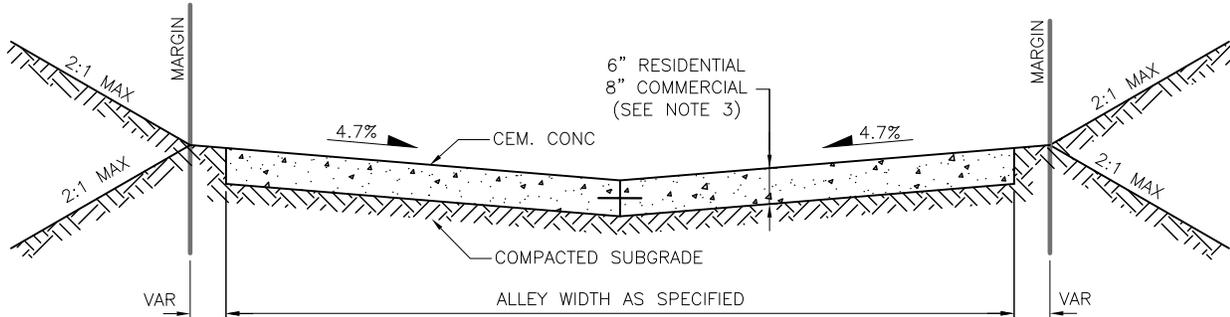
REF STD SPEC SEC 4-04, 5-04, 5-05 & 8-04



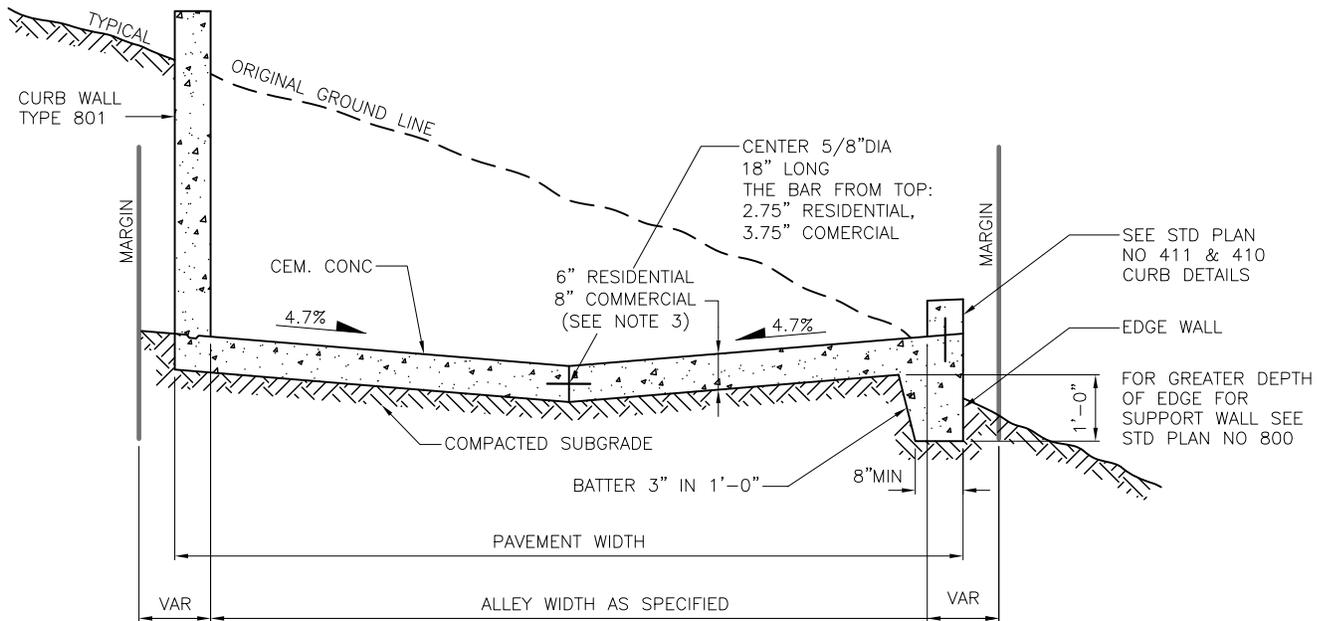
City of Seattle

NOT TO SCALE

**COMMERCIAL AND
 ARTERIAL PAVEMENT
 SECTIONS**



CONCRETE ALLEY PAVEMENT



**CEMENT CONCRETE ALLEY PAVEMENT
403B—FOR SHALLOW EMBANKMENT AREA**

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.

REF STD SPEC SEC 8-17, 8-19



City of Seattle

NOT TO SCALE

**ROADWAY CEMENT CONCRETE
ALLEY PAVEMENTS**

HALF SECTION

RIGID PAVEMENT WITH ASPHALT CONCRETE SURFACE

REMOVE ASPHALT OVERLAY

SAWCUT ASPHALT CONC (REMOVE LOOSENEED AREAS)

EXISTING ASPHALT CONCRETE PAVEMENT

TACK COAT

EXISTING RIGID BASE

SAWCUT CONCRETE FULL DEPTH

STEP EXCAVATION TO AVOID UNDERMINING EX PAVEMENT (TYP)

MIN WIDTH FOR RESTORATION**

HMA (CL 1/2")**

CEM. CONC SHALL BE THICKNESS GREATER OF "D" OR 9 INCHES

12"

D**

HALF SECTION

CEMENT CONCRETE PAVEMENT

SAWCUT CONCRETE FULL DEPTH

EXISTING CONCRETE PAVEMENT

D

6" MIN

STEP EXCAVATION TO AVOID UNDERMINING EX PAVEMENT (TYP)

COMPACT MINERAL AGGREGATE TYPE 2

TRENCH WIDTH

COMPACT BACKFILL

TYPICAL PATCH FOR RIGID PAVEMENT

HALF SECTION

FLEXIBLE PAVEMENT (≤ 3' TYP)

PLANE ASPHALT PRIOR TO PLACING FINAL LIFT

EXISTING OIL MAT

TACK COAT

EXISTING EARTH OR GRANULAR BASE

COMPACT MINERAL AGGREGATE TYPE 2

STEP EXCAVATION TO AVOID UNDERMINING EX PAVEMENT (TYP)

COMPACT BACKFILL

MIN WIDTH FOR RESTORATION**

HMA (CL 1/2")**

3"

6" MIN

6" MIN

TRENCH WIDTH

HALF SECTION

FLEXIBLE PAVEMENT (≥ 3' TYP)

PLANE ASPHALT PRIOR TO PLACING FINAL LIFT

SAWCUT ASPHALT CONC

EXISTING ASPHALT CONCRETE SURFACE

TACK COAT

EXISTING FLEXIBLE BASE

HMA (CL 1/2" OR 1")**

STEP EXCAVATION TO AVOID UNDERMINING EX PAVEMENT (TYP)

COMPACT MINERAL AGGREGATE TYPE 2

COMPACT BACKFILL

TYPICAL PATCH FOR FLEXIBLE PAVEMENT

- ** DEPTH OF RESTORATION SHALL MEET THE REQUIREMENTS OF "STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES".
- WIDTH OF RESTORATION SHALL MEET REQUIREMENTS OF STANDARD PLAN 404c.

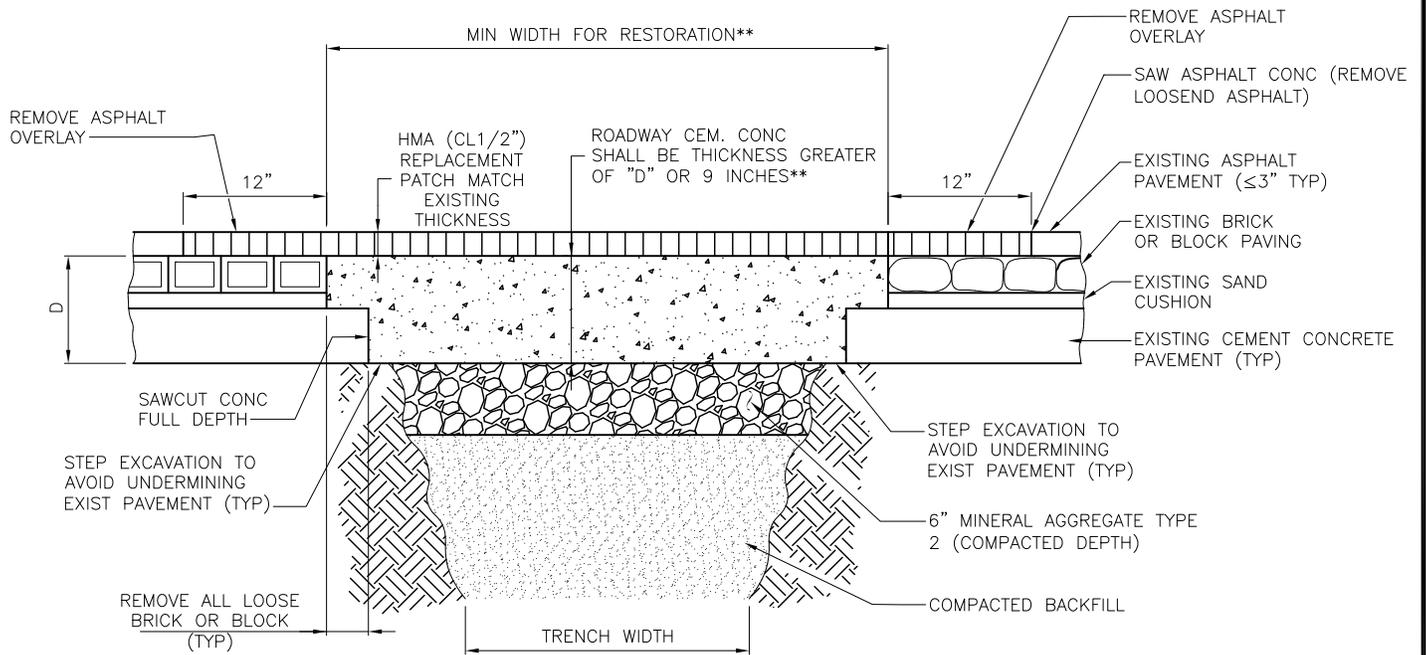
REF STD SPEC SEC 2-02, 5-04 & 5-05



City of Seattle

NOT TO SCALE

PAVEMENT PATCHING



ASPHALT OVER RIGID BASE OF BRICK OR STONE BLOCK PAVEMENT

HALF SECTION

- ** WIDTH OF RESTORATION SHALL MEET REQUIREMENTS OF STANDARD PLAN 404c.
- DEPTH OF RESTORATION SHALL MEET THE REQUIREMENTS OF "STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES".

REF STD SPEC SEC 2-02, 5-04 & 5-05



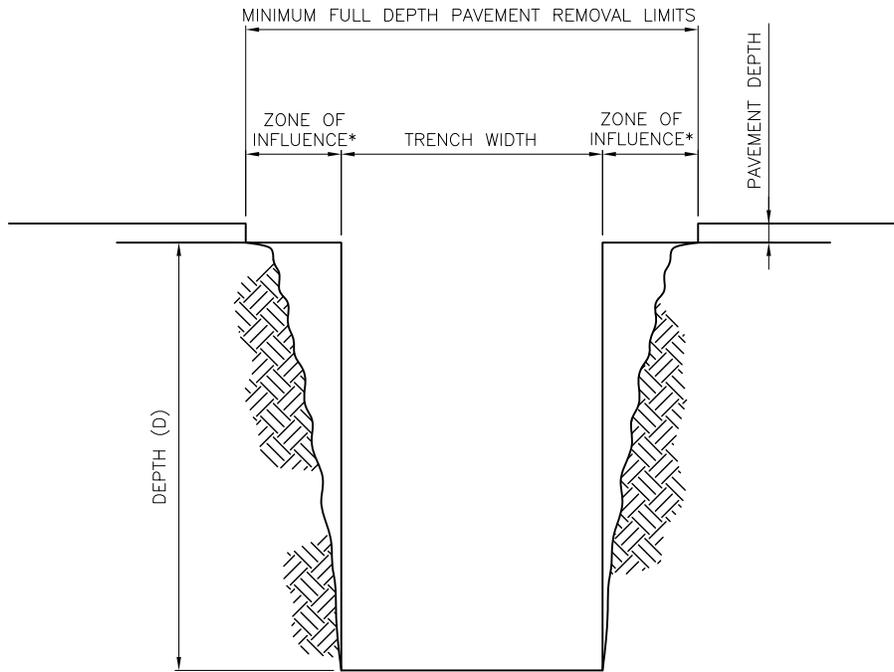
City of Seattle

NOT TO SCALE

PAVEMENT PATCHING

NOTES:

1. DUE TO POTENTIAL LOSS OF SOIL STRENGTH IN AREAS ADJACENT TO TRENCH OPENINGS, PAVEMENT REMOVAL SHALL BE WIDENED TO INCLUDE THE ZONE OF INFLUENCE.
2. SEE STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES FOR MORE INFORMATION ON PAVEMENT OPENINGS ZONE OF INFLUENCE.
[HTTP://WWW.SEATTLE.GOV/TRANSPORTATION/STUSE_PAVEMENTOPEN.HTM](http://www.seattle.gov/transportation/stuse_pavementopen.htm)



*TYPICALLY D/4

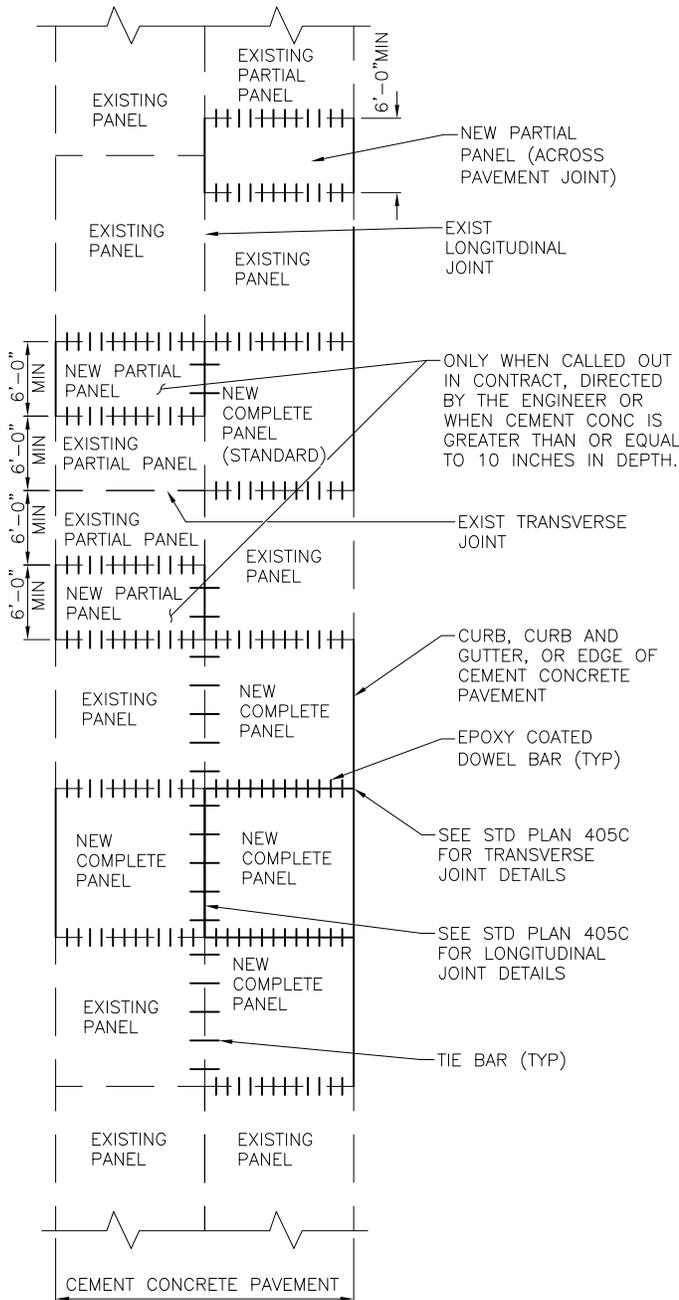
REF STD SPEC SEC 2-02, 2-04



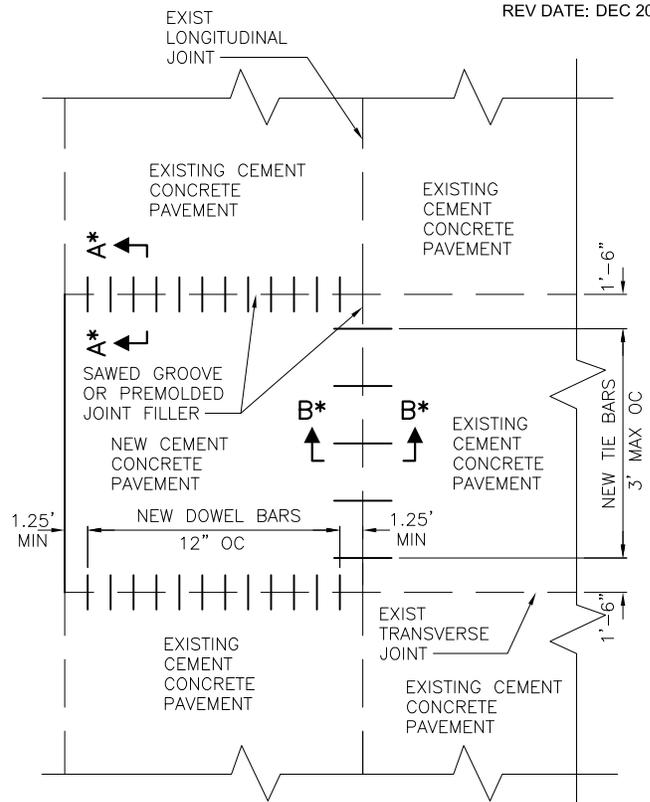
City of Seattle

NOT TO SCALE

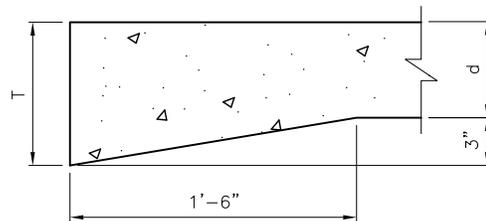
PAVEMENT OPENING
ZONE OF INFLUENCE



PLAN VIEW
PANEL REPLACEMENT



PLAN VIEW
COMPLETE PANEL REPLACEMENT



THICKENED EDGE DETAIL

(NOT NEEDED FOR TYPE A JOINTS WIDTH $d \geq 10"$)
(NOT NEEDED FOR TYPE B JOINTS WIDTH $d \geq 9"$)

NOTES

1. INSTALL TIE BARS ALONG LONGITUDINAL JOINT BETWEEN FULL PANEL REPLACEMENT AND EXIST CEMENT CONC PAVEMENT. TIE BARS ARE NOT INSTALLED BETWEEN CEMENT CONC PAVEMENT AND HOT MIX ASPHALT SHOULDERS.
2. TIE BARS AND DOWELS ARE NOT REQUIRED:
 - 2.1. WHEN INDICATED ON THE DRAWINGS BY "NO TIE BARS" OR "NO DOWEL BARS".
 - 2.2. WHEN EXISTING PAVEMENT IS LESS THAN A THICKNESS OF 8" OR WHEN THE ENGINEER DETERMINES THE EXISTING CONC NOT TO BE COMPETENT.
3. DO NOT PLACE LONGITUDINAL JOINTS OR SKEWED JOINTS WITHIN BIKE LANES.
4. WHEN PAVING ADJACENT TO EXISTING PANELS, THE NEW TRANSVERSE JOINTS SHALL BE PLACED TO MATCH JOINT LOCATIONS OF THE EXISTING ADJACENT PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE STD PLAN NO 405C FOR MAXIMUM TRANSVERSE JOINT SPACING.

A* SEE SECTION A-A STANDARD PLAN 405b
B* SEE SECTION B-B STANDARD PLAN 405b

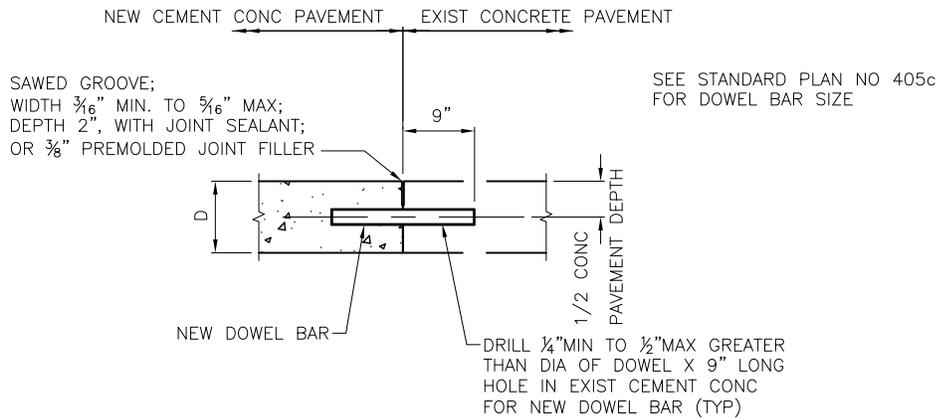
REF STD SPEC SEC 5-05



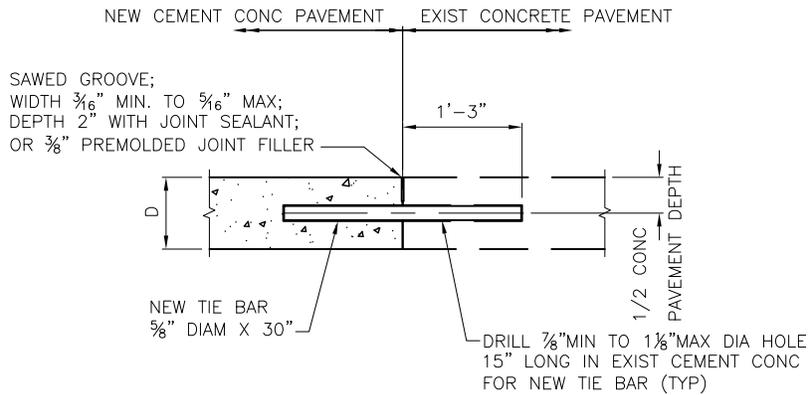
City of Seattle

NOT TO SCALE

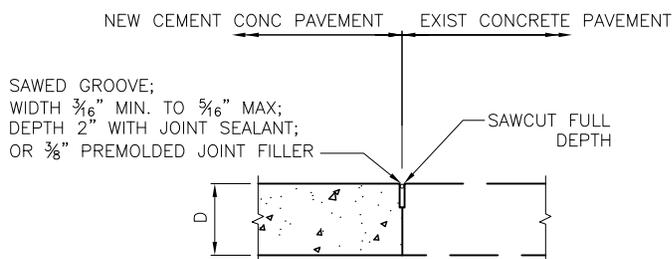
ROADWAY CONCRETE
PAVEMENT REPAIR



**SECTION A-A
DOWEL BAR DETAIL**



**SECTION B-B
TIE BAR DETAIL**



WITHOUT TIE BAR OR DOWEL

USE ONLY WHEN SHOWN IN
CONTRACT OR APPROVED BY
THE ENGINEER

REF STD SPEC SEC 5-05



City of Seattle

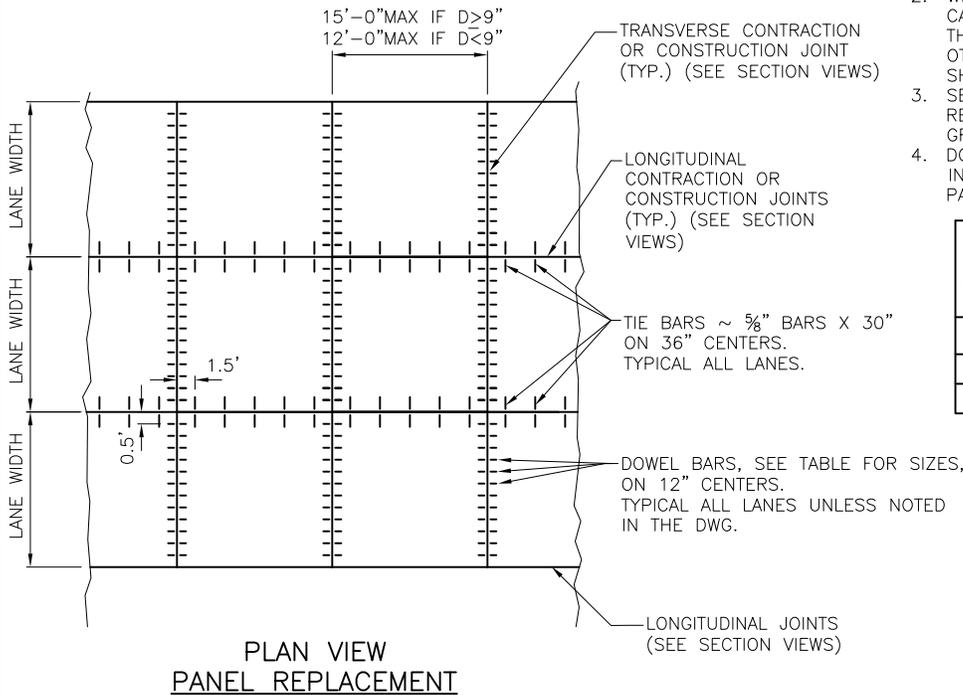
NOT TO SCALE

**PAVEMENT REPAIR
DOWEL BAR AND
TIE BAR DETAILS**

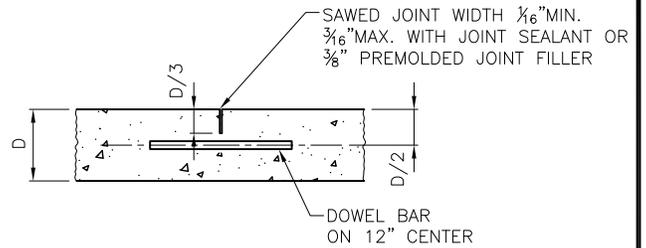
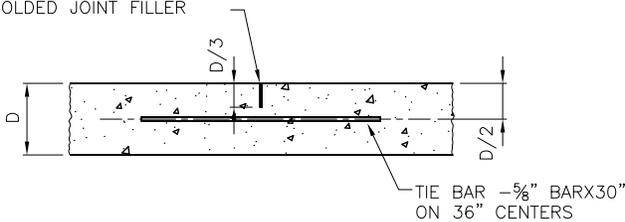
NOTES:

- DO NOT PLACE LONGITUDINAL JOINTS OR SKEWED JOINTS WITHIN BIKE LANES.
- WHEN A JOINT IS WITHIN 18 INCHES OF A CASTING JOINTS SHOULD BE SKEWED TO MEET THE CASTING AT 90 DEGREES UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR SHOWN ON THE DRAWINGS.
- SEE STD PLAN NO 406 OR DRAWINGS FOR REBAR DETAIL AROUND CASTING 18 INCHES OR GREATER FROM JOINTS.
- DOWEL BARS SHALL NOT BE PLACED WITHIN 15 INCHES OF THE EDGE OF PAVEMENT OR A PARALLEL JOINT.

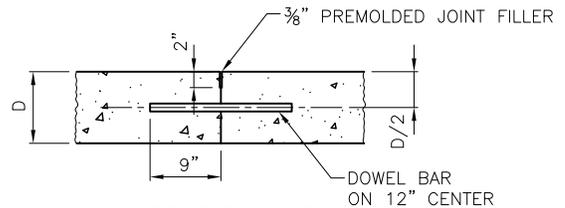
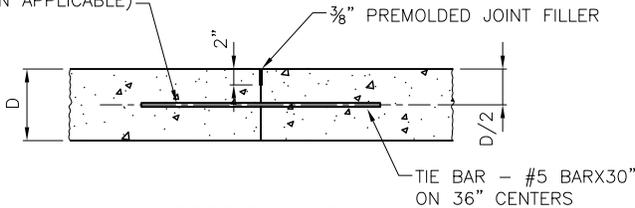
DEPTH (D) OF RDWY CEM. CONC	DOWEL BAR SIZE (DIA ϕ)
$6" \leq D < 9"$	1"X18"
$9" \leq D < 11"$	1 1/4"X18"
$11" \leq D$	1 1/2"X18"



SAWED JOINT WIDTH 1/16" MIN.
3/16" MAX. WITH JOINT SEALANT OR
3/8" PREMOLDED JOINT FILLER



DRILL AND GROUT (WHEN APPLICABLE)



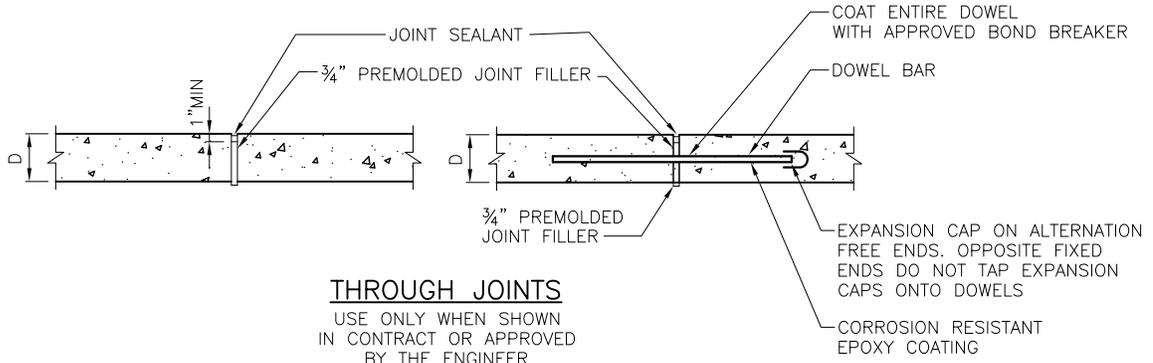
REF STD SPEC SEC 5-05



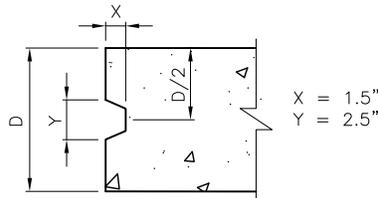
City of Seattle

NOT TO SCALE

**ROADWAY CONCRETE PAVEMENT
JOINTS**



THROUGH JOINTS
 USE ONLY WHEN SHOWN
 IN CONTRACT OR APPROVED
 BY THE ENGINEER



(TIE BAR OMITTED FOR CLARITY)

KEYWAY DETAIL
LONGITUDINAL JOINT WITH KEYWAY
 (OPTIONAL FOR ≥9 INCHES ONLY)

NOTE:
 USE OF OPTIONAL KEYWAY MAY BE REVOKED BY THE ENGINEER AT ANYTIME DUE TO QUALITY CONTROL ISSUES WITH MAINTAINING PLACEMENT REQUIREMENTS WITHIN ±3/8 INCH VERTICALLY.

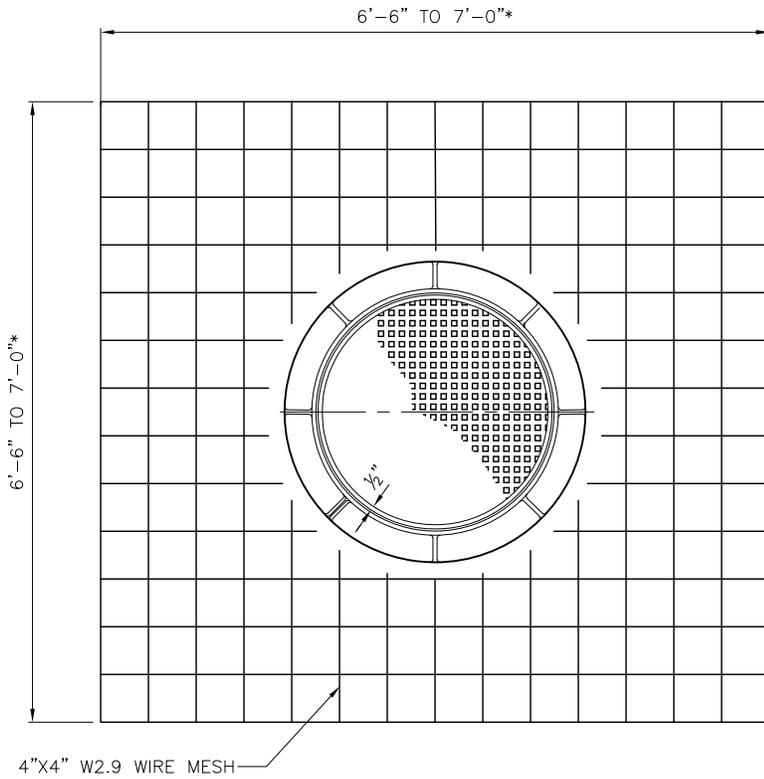
REF STD SPEC SEC 5-05



City of Seattle

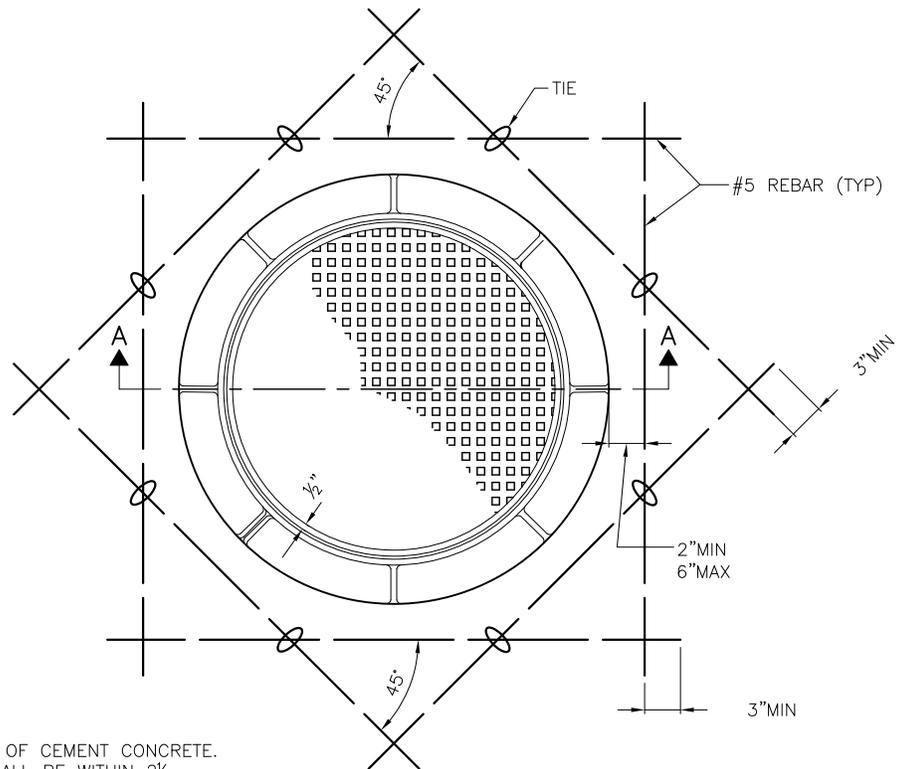
NOT TO SCALE

**THROUGH JOINTS AND
 OPTIONAL KEYWAYS FOR
 CEMENT CONCRETE ROADWAY**



NOTES:

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

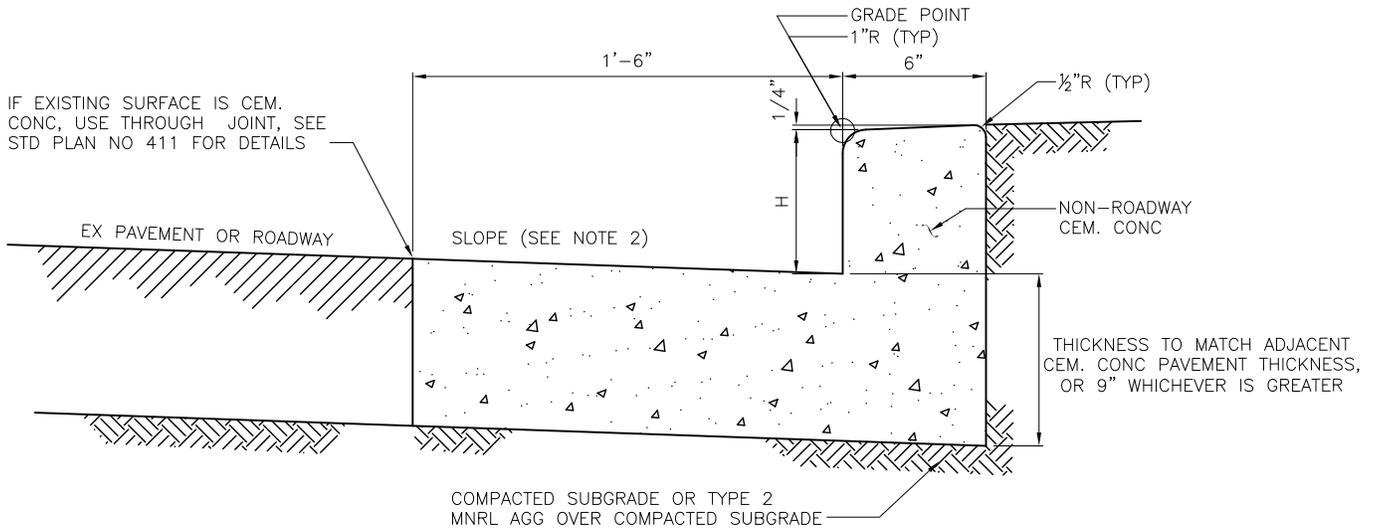
REF STD SPEC SEC 5-05



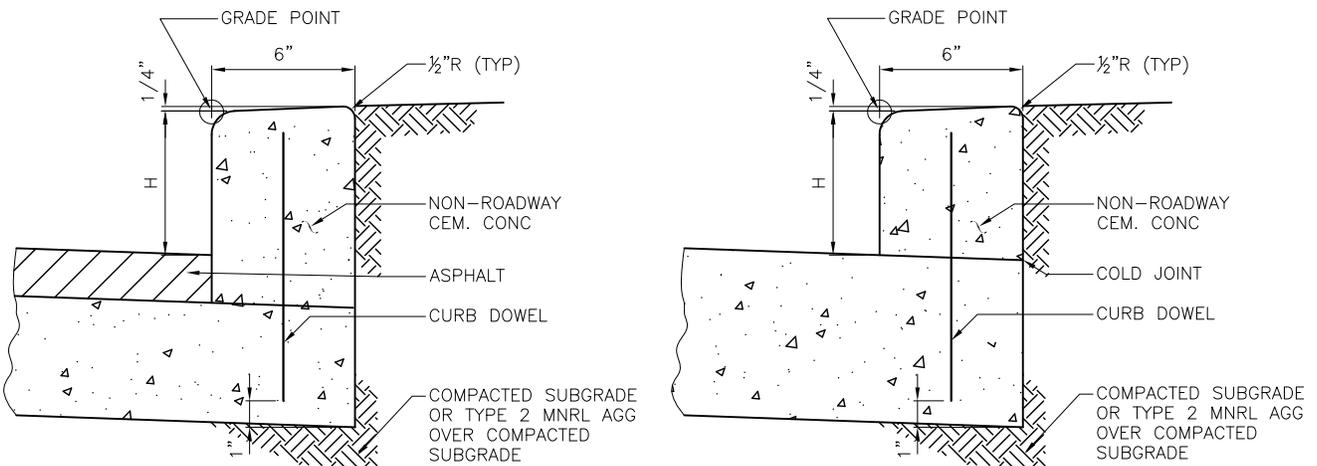
City of Seattle

NOT TO SCALE

**FRAME & COVER CEMENT
CONCRETE REINFORCEMENT
DETAIL**



410B CURB & GUTTER



410C CURB

NOTES:

1. "H" SHALL BE 6" FROM FINISHED ROADWAY GRADE UNLESS OTHERWISE SHOWN ON DRAWINGS
2. GUTTER SHALL BE SLOPED THE SAME AS ADJACENT PAVEMENT OR 2% MIN, WHICHEVER IS GREATER.
3. SEE STD PLAN NO 411 FOR CURB DOWELS

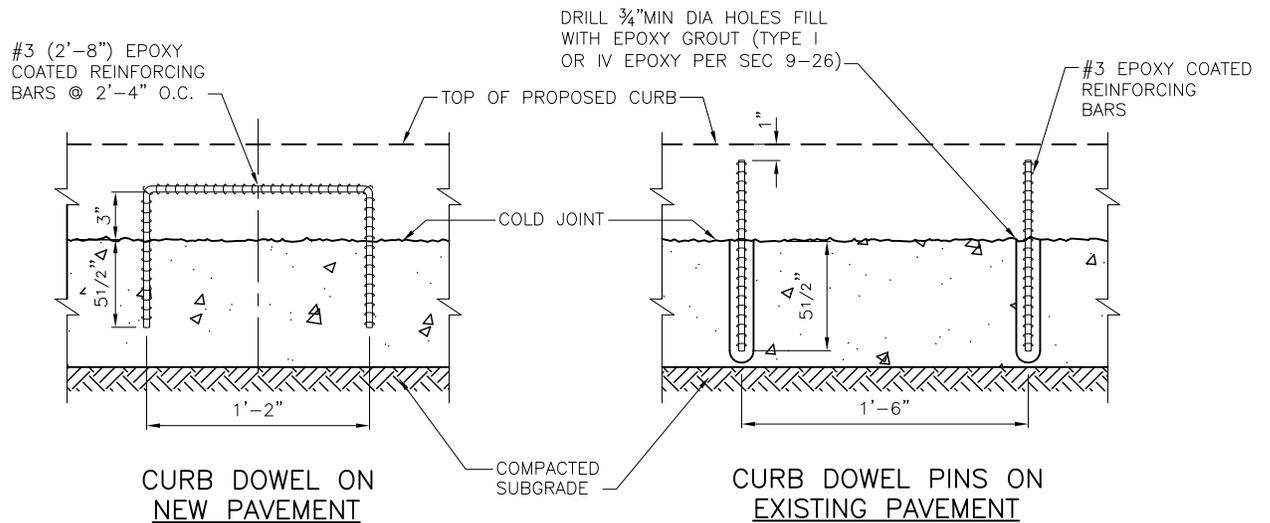
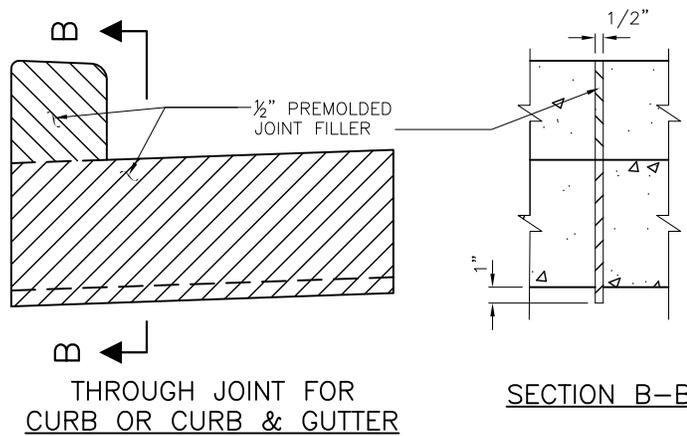
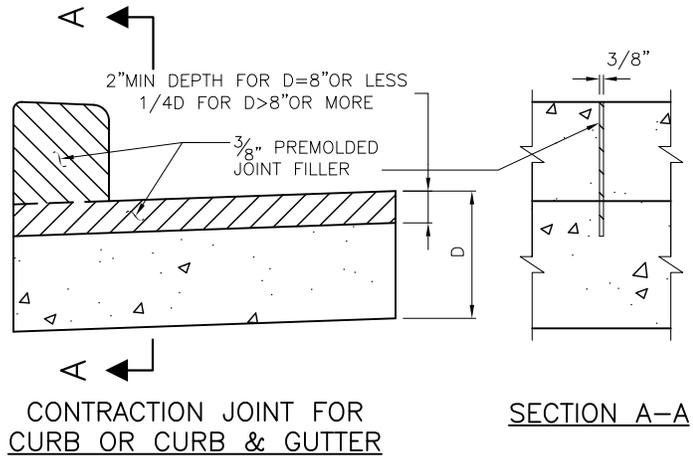
REF STD SPEC SEC 8-04



City of Seattle

NOT TO SCALE

TYPE 410 CURB



DOWELS FOR DOWELLED CURB CONSTRUCTION

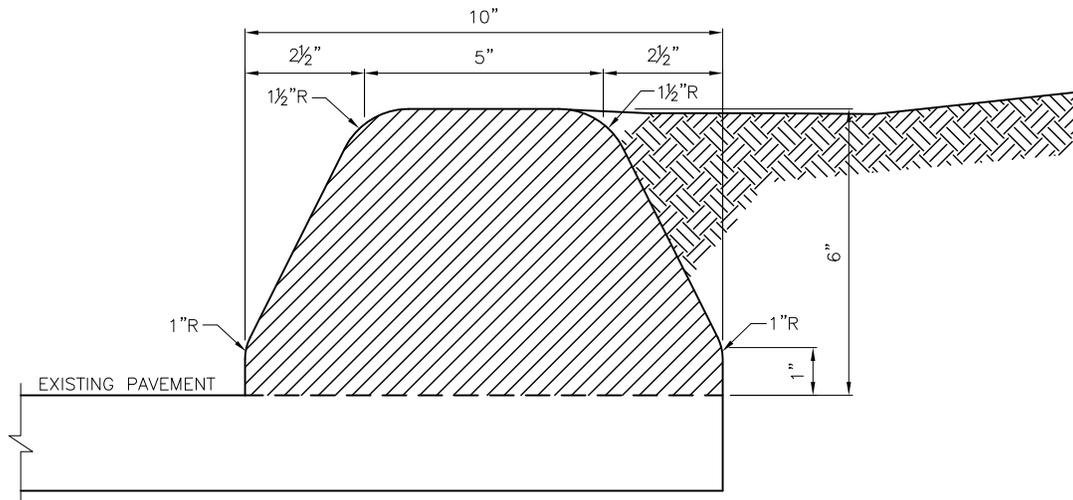
REF STD SPEC SEC 8-04



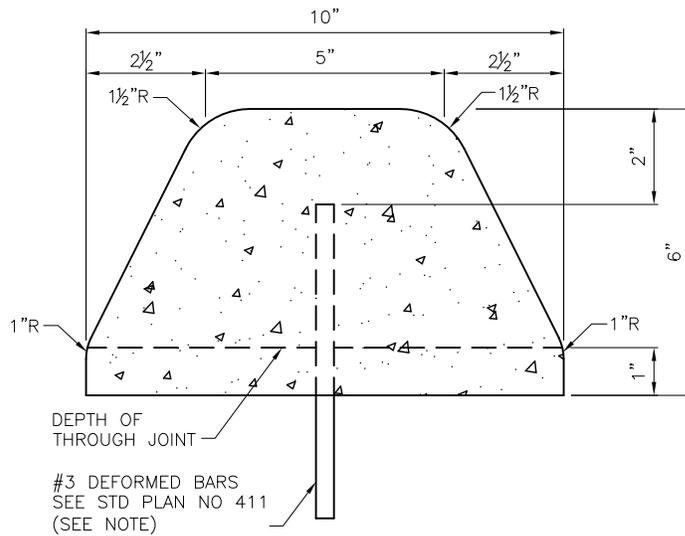
City of Seattle

NOT TO SCALE

CURB JOINTS & DOWELS



EXTRUDED ASPHALT CONCRETE CURB



EXTRUDED CEMENT CONCRETE CURB

NOTE:
ALTERNATELY, THE USE OF EPOXY BONDING AGENT,
IN PLACE OF #3 DEFORMED BARS, WILL BE ALLOWED.

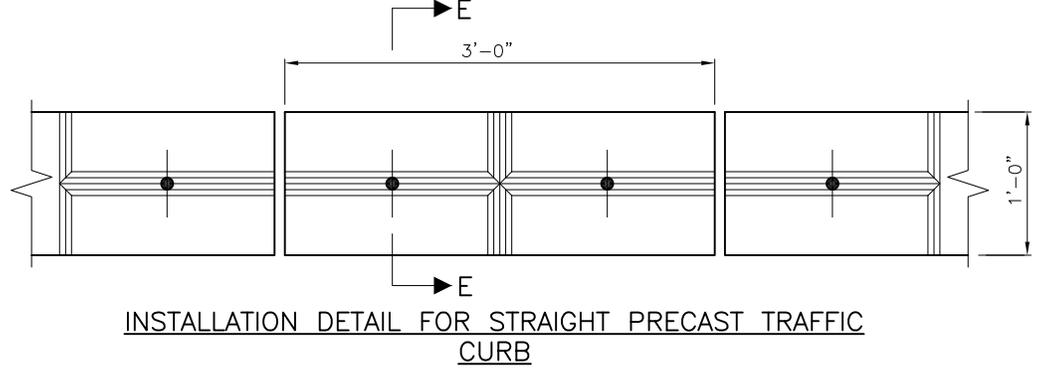
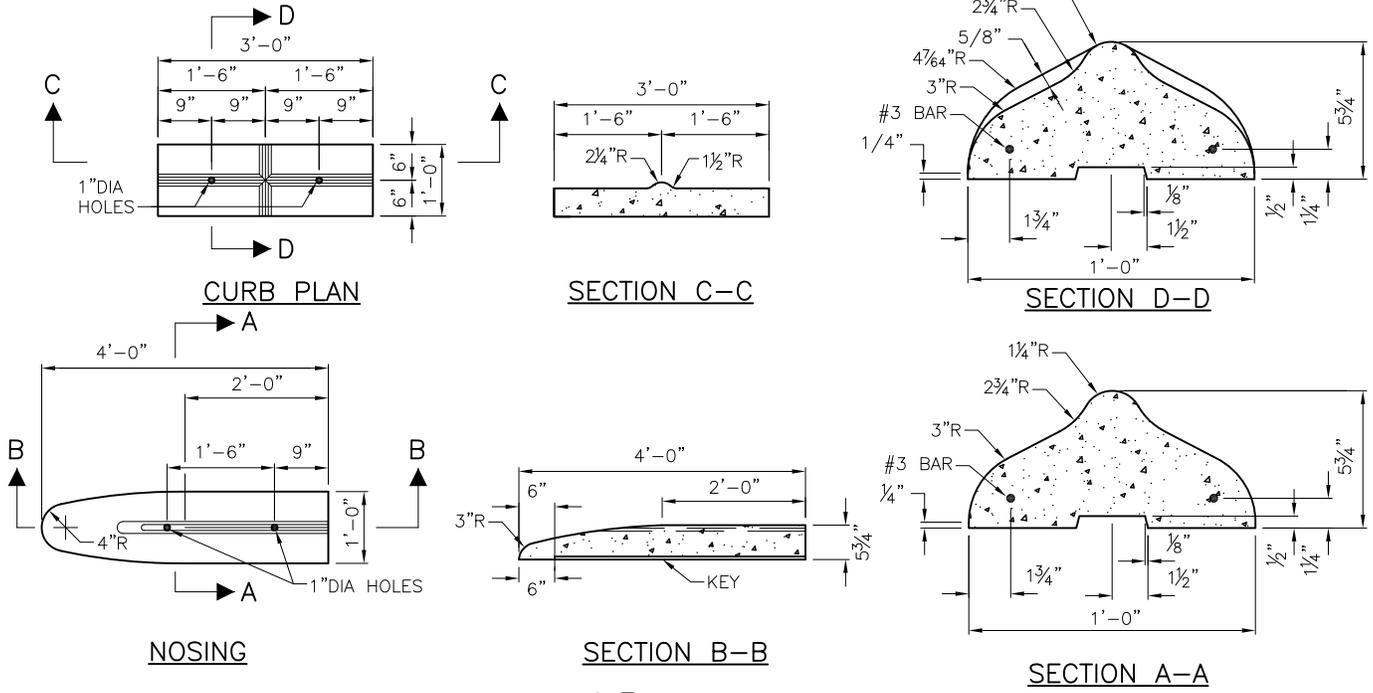
REF STD SPEC SEC 8-06



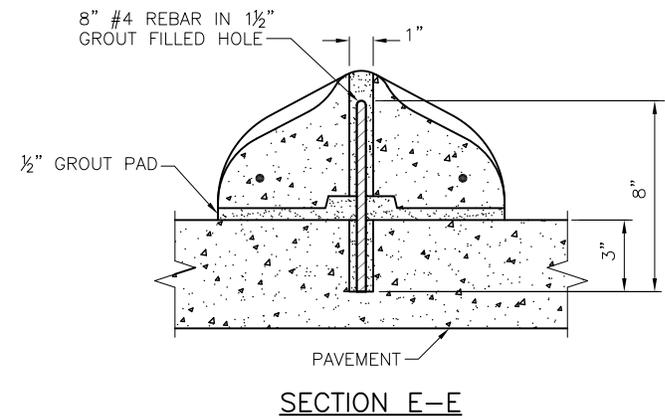
City of Seattle

NOT TO SCALE

EXTRUDED CURB



NOTE:
 INSTALL 8" #4 REBAR IN EVERY HOLE
 AND FILL HOLE WITH GROUT

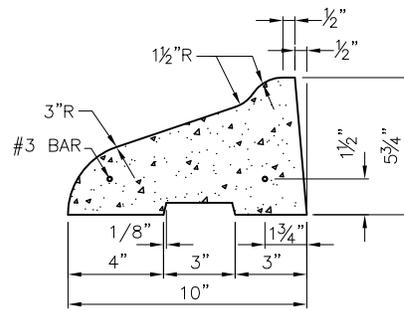
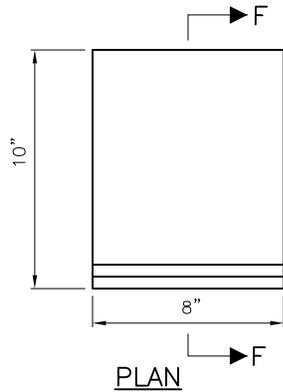


REF STD SPEC SEC 8-07

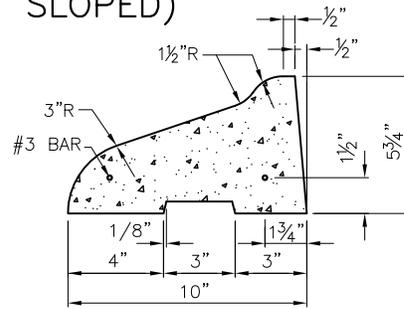
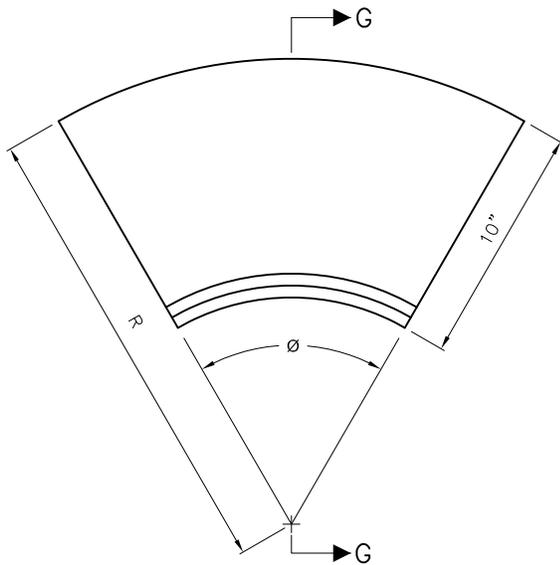


NOT TO SCALE

**3' PRECAST TRAFFIC CURB
 (DUAL SLOPED)**



**8" STRAIGHT BLOCK CURB
(SINGLE SLOPED)**

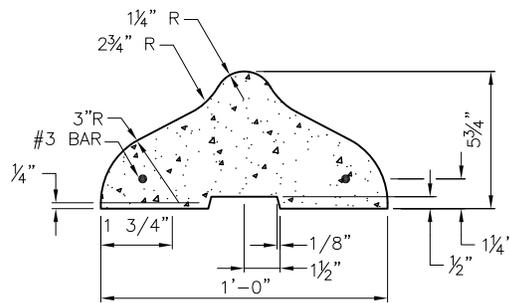
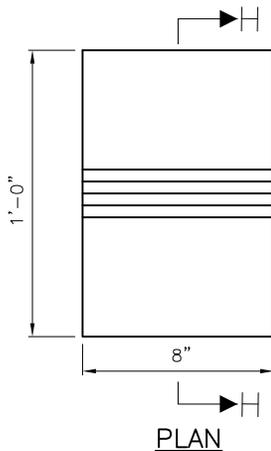


RADIAL CURB

UNIT	RADIUS	CURB RETURN ANGLE(θ)MULTIPLE
R1	1'-3"	45°00'
R2	1'-10"	30°00'
R3	2'-6"	22°30'
R4	5'-0"	11°27.54'
R5	10'-0"	5°43.77'

FOR RADII GREATER THAN 10'-0" USE SEGMENTS OF STRAIGHT BLOCK CURB

RADIUS CURB TABLE



**8" STRAIGHT BLOCK CURB
(DUAL SLOPED)**

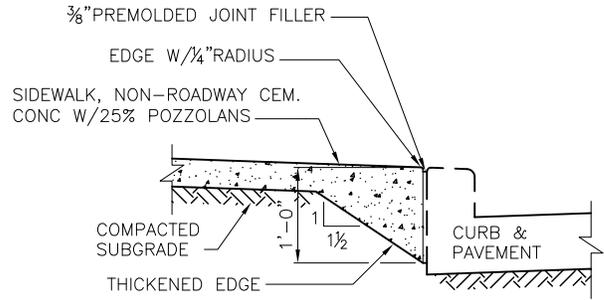
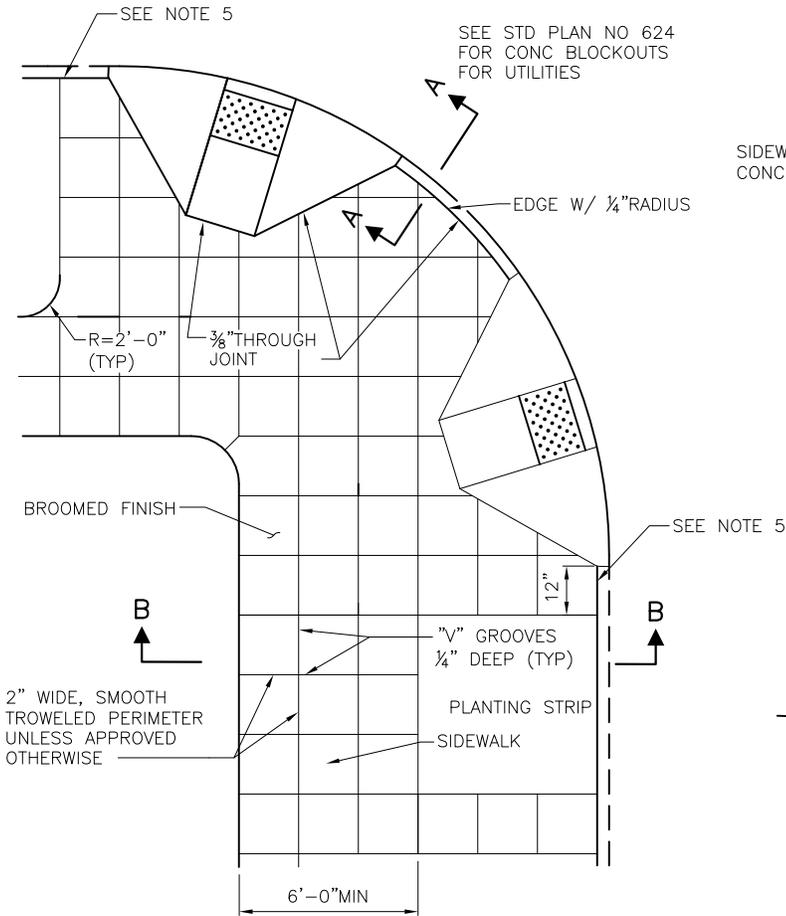
REF STD SPEC SEC 8-07



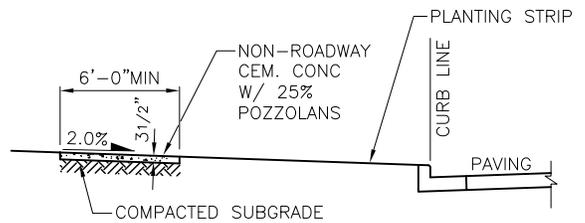
City of Seattle

NOT TO SCALE

**8" BLOCK AND RADIAL
TRAFFIC CURB**



THROUGH JOINT @ SECTION A-A
UNLESS CURB IS MONOLITHIC WITH SIDEWALK



SECTION B-B

TYPICAL SIDEWALK & CURB RAMP DETAIL

NOTES:

1. 3/8" THROUGH AND CONTRACTION JOINTS SHALL BE LOCATED AS REQUIRED BY SECTION 8-14.3(6).
2. "V" GROOVE SCORING SHALL MATCH PATTERN IN ADJACENT EXISTING SIDEWALK OR SHALL BE A 2" SQUARE SCORING PATTERN UNLESS OTHERWISE OTHERWISE APPROVED BY THE ENGINEER.
3. FOR CURB RAMPS, SEE STANDARD PLAN NO 422.
4. FOR TREE PITS, SEE STANDARD PLAN NO 424.
5. 12" MINIMUM BETWEEN EDGE OF RAMP WING AND PLANTING STRIP IS DESIRABLE.
6. ALL SIDEWALK SHALL BE NON-ROADWAY CEM CONC W/ 25% POZZOLANS.

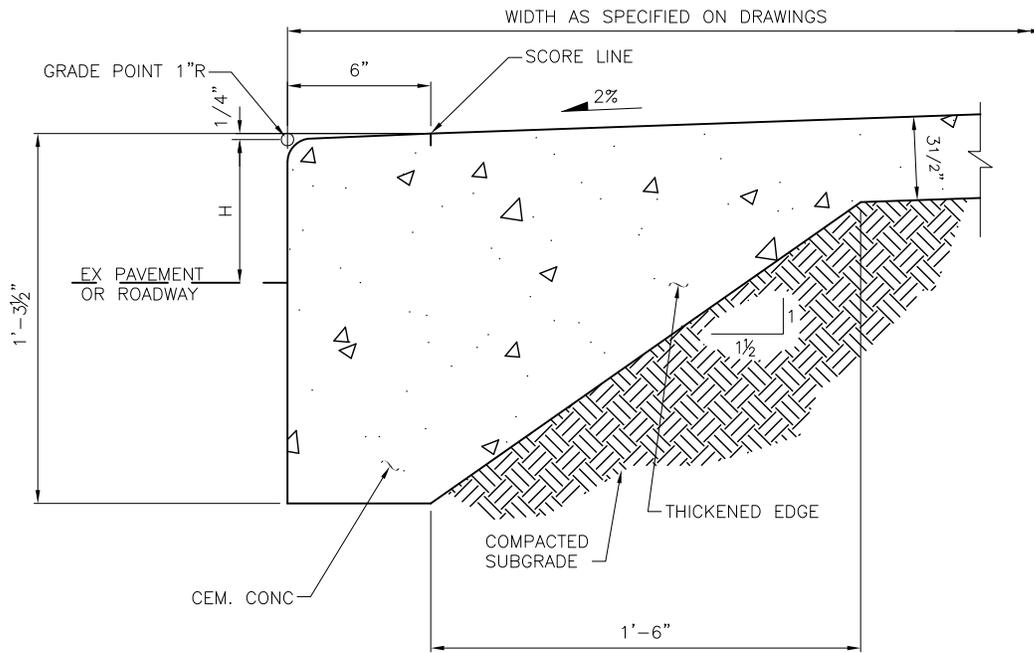
REF STD SPEC SEC 8-14



City of Seattle

NOT TO SCALE

CONCRETE SIDEWALK DETAILS



NOTE:
 "H" SHALL BE 6" FROM FINISHED ROADWAY GRADE UNLESS OTHERWISE SPECIFIED

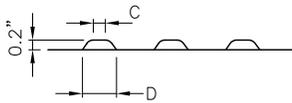
REF STD SPEC SEC 8-14



City of Seattle

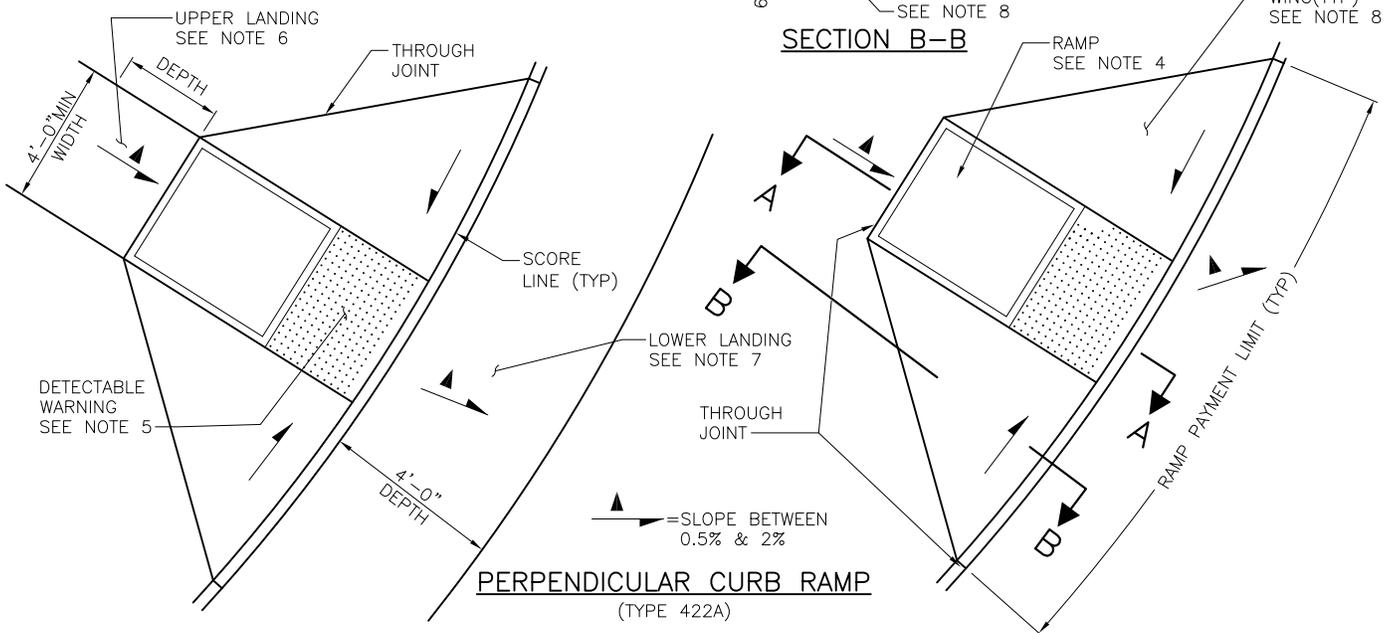
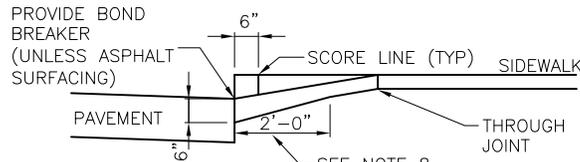
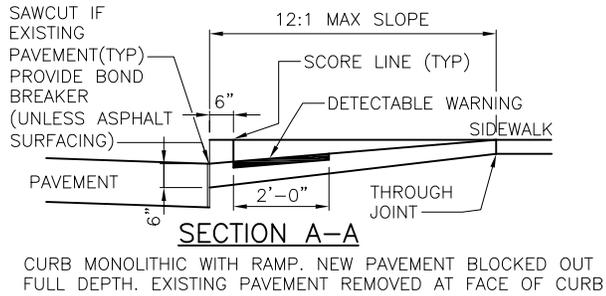
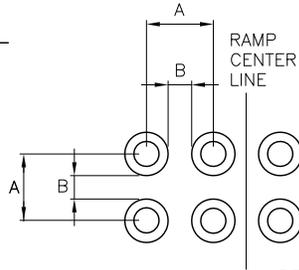
NOT TO SCALE

SIDEWALK WITH
 MONOLITHIC CURB



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

**TRUNCATED DOMES PATTERN
DETECTABLE WARNING CONC PANELS**



NOTES:

- TYPE 422A PERPENDICULAR CURB RAMP SHALL BE USED UNLESS OTHERWISE DIRECTED BY ENGINEER.
- TWO CURB RAMPS SHALL BE INSTALLED AT EACH CORNER UNLESS OTHERWISE DIRECTED BY ENGINEER. RECOMMENDED MINIMUM DISTANCE BETWEEN TWO ADJACENT CURB RAMPS SHALL BE 3'-0". WHERE SPACE IS RESTRICTED THE MINIMUM DISTANCE BETWEEN TWO ADJACENT CURB RAMPS MAY BE REDUCED TO 1'-0".
- CURB RAMP SHALL BE CONSTRUCTED WITH COMPANION RAMP ON OPPOSITE SIDE OF THE ROADWAY UNLESS OTHERWISE DIRECTED BY ENGINEER.
- RAMP CENTERLINE SHALL BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB. RAMP SHALL HAVE A MAXIMUM SLOPE 12H:1V. AND A MINIMUM WIDTH OF 4'-0". THE CROSS SLOPE OF THE RAMP SHALL BE MAXIMUM OF 50H:1V. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB. MAXIMUM RAMP LENGTH SHALL BE 15 FEET
- DETECTABLE WARNING SHALL HAVE A TRUNCATED DOME PATTERN AS SHOWN, A MINIMUM WIDTH OF 2'-0" AND SHALL BE PLACED AT THE RAMP BOTTOM STARTING AT THE BACK OF CURB. DETECTABLE WARNING COLOR SHALL BE "FEDERAL SAFETY YELLOW", UNLESS OTHERWISE DIRECTED.
- UPPER LANDING SHALL BE FULL WIDTH OF THE RAMP AND SHALL HAVE A MINIMUM DEPTH OF 4'-0". SLOPE ON THE UPPER LANDING SHALL BE BETWEEN 0.5% AND 2%. AVOID PLACING HANDHOLES, UTILITY CASTINGS OR OTHER OBSTRUCTIONS IN THE UPPER LANDING.
- LOWER LANDING SHALL BE FULL WIDTH OF THE RAMP AND SHALL EXTEND A MINIMUM 4'-0" BEYOND DETECTABLE WARNING. THE LOWER LANDING SHALL BE THE WIDTH OF THE RAMP AND FALL WHOLLY WITHIN THE LEGAL CROSSWALK, MARKED OR UNMARKED. SLOPE ON THE LOWER LANDING SHALL BE BETWEEN 0.5% AND 2%. GUTTER FLOW LINE SHALL BE SURVEYED BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE PONDING OF WATER SHALL NOT OCCUR ON THE LOWER LANDING.
- WINGS SHALL HAVE A MAXIMUM SLOPE OF 10H:1V. IF UPPER LANDING HAS A DEPTH LESS THAN 4'-0", THE MAXIMUM SLOPE FOR THE WINGS SHALL BE 12H:1V. WINGS SHALL HAVE A BRUSHED FINISH. PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB SHALL CONTINUE THROUGH EACH WING.
- 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.
- 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.

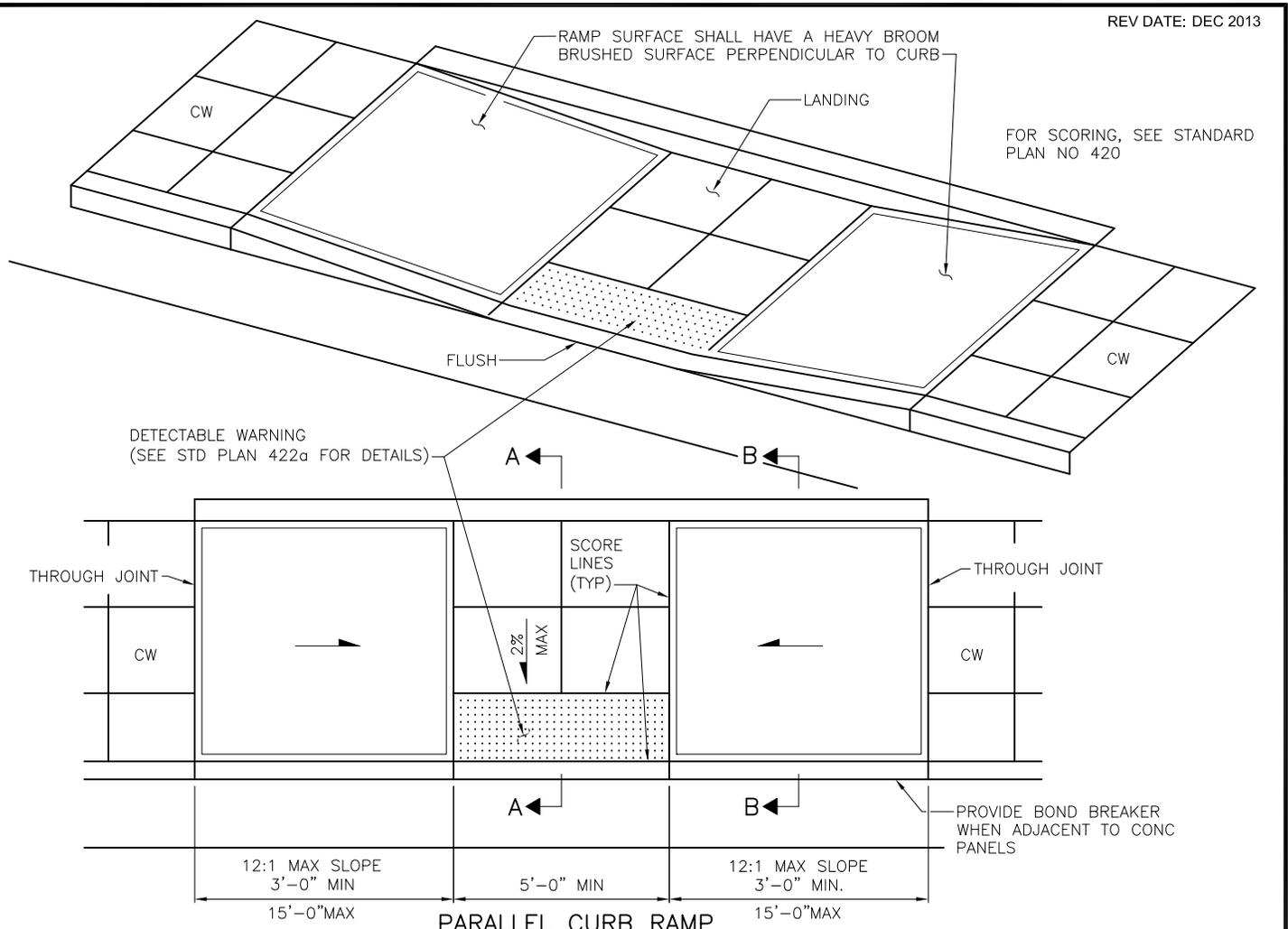
REF STD SPEC SEC 8-14



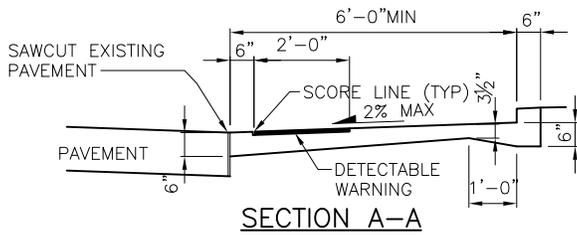
City of Seattle

NOT TO SCALE

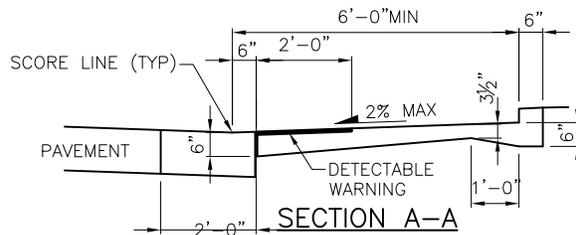
CURB RAMP DETAILS



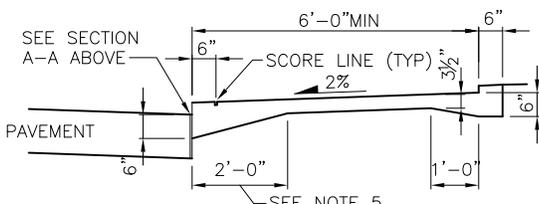
USE PARALLEL CURB RAMPS ONLY WHEN SHOWN IN DRAWINGS OR WITH APPROVAL OF ENGINEER.
PARALLEL CURB RAMPS MAY ALSO BE USED ON CURVES; ALL REQUIREMENTS SHALL APPLY.



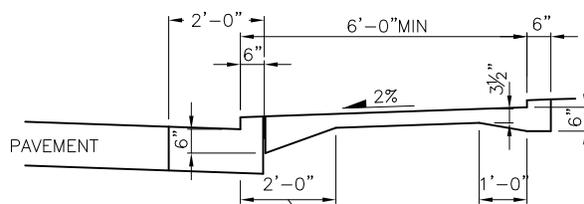
NEW PAVEMENT BLOCKED OUT FULL DEPTH.
EXISTING PAVEMENT REMOVED AT FACE OF CURB



DEPRESSED CURB & GUTTER SEPARATE FROM RAMP



SEE NOTE 5
NON CURB & GUTTER



SEE NOTE 8
WITH CURB & GUTTER

REF STD SPEC SEC 8-14

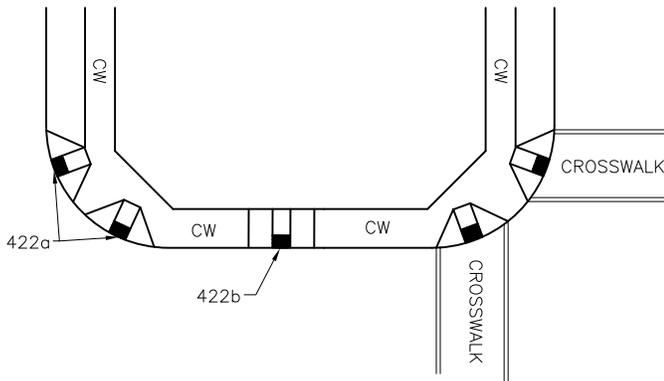


City of Seattle

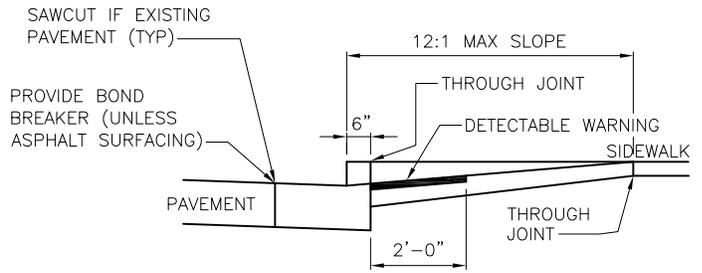
NOT TO SCALE

CURB RAMP DETAILS

SEE STD PLAN NO 422a FOR NOTES

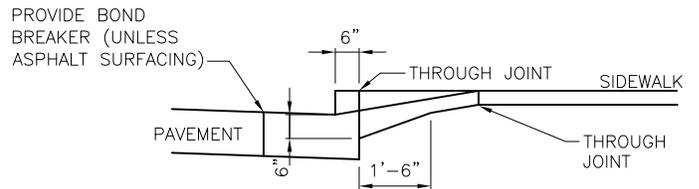


CURB RAMP LOCATIONS

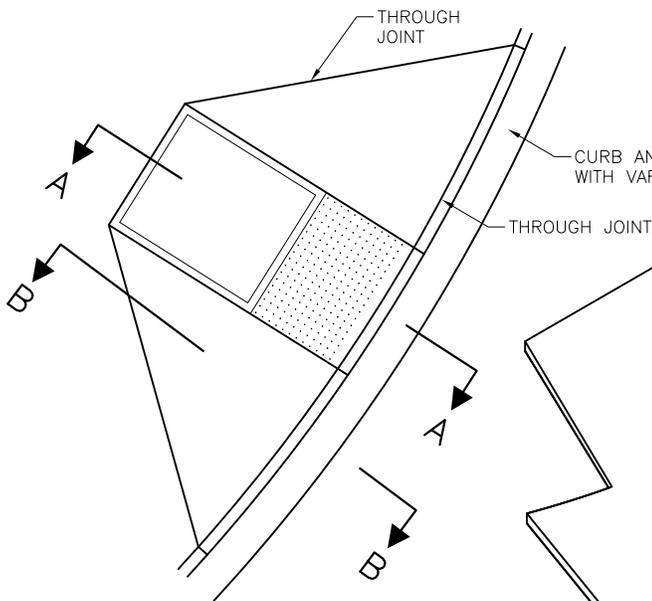


SECTION A-A

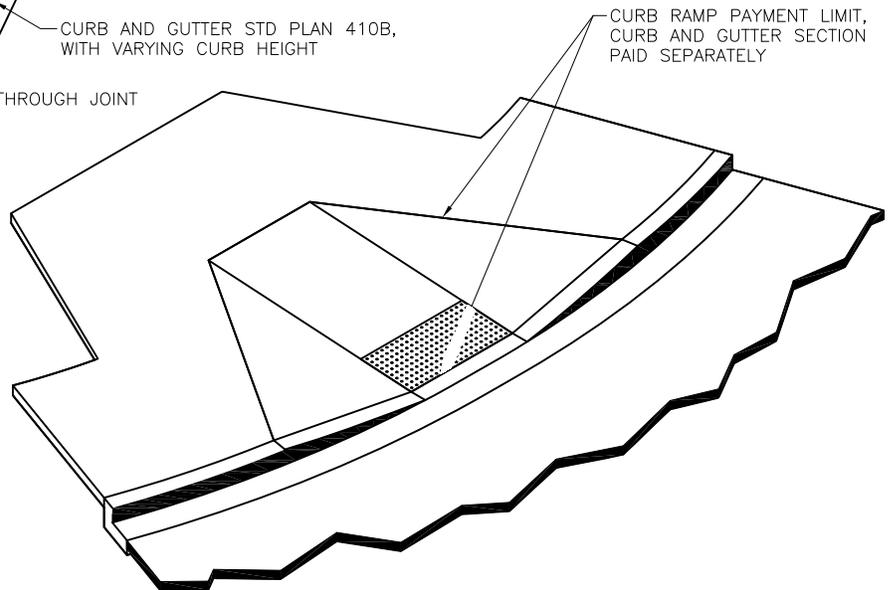
DEPRESSED CURB & GUTTER SEPARATE FROM RAMP.



SECTION B-B



PERPENDICULAR CURB RAMP
(TYPE 422A WITH CURB AND GUTTER)



PERPENDICULAR CURB RAMP PAYMENT LIMIT
ISOMETRIC VIEW

NOTES:

1. FOR DETECTABLE WARNING PLATE/TRUNCATED DOMES DETAILS, SEE STANDARD PLAN NO 422a.
2. FOR NOTES AND DETAILS NOT SHOWN, SEE STANDARD PLAN NO 422a.

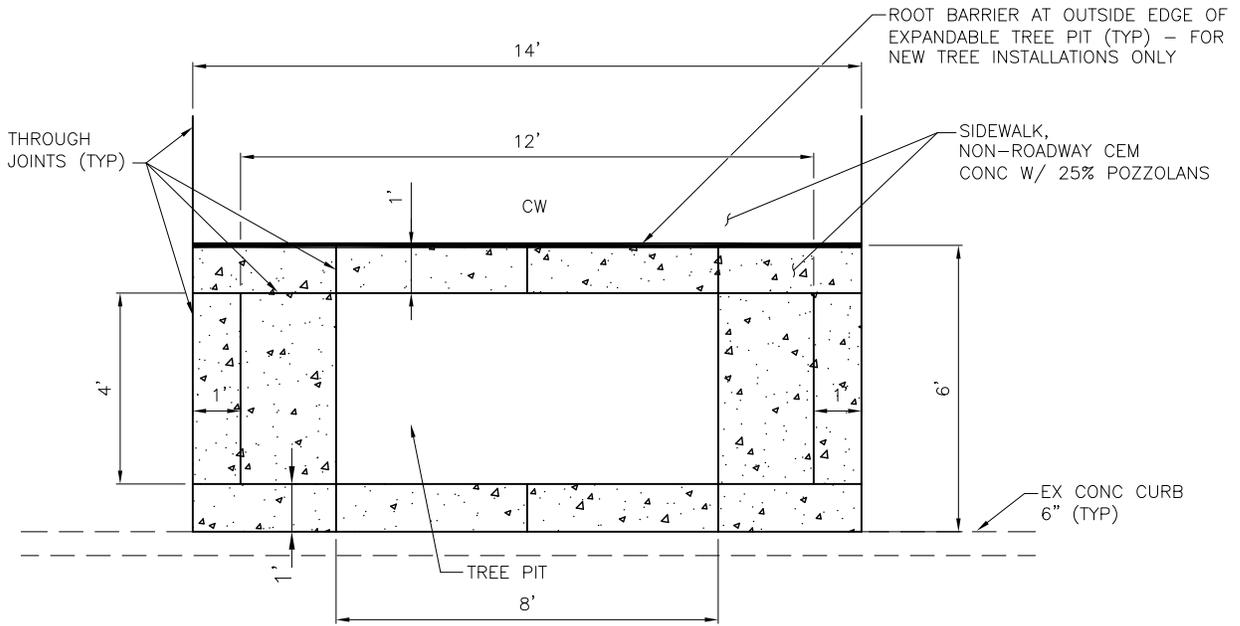
REF STD SPEC SEC 8-14



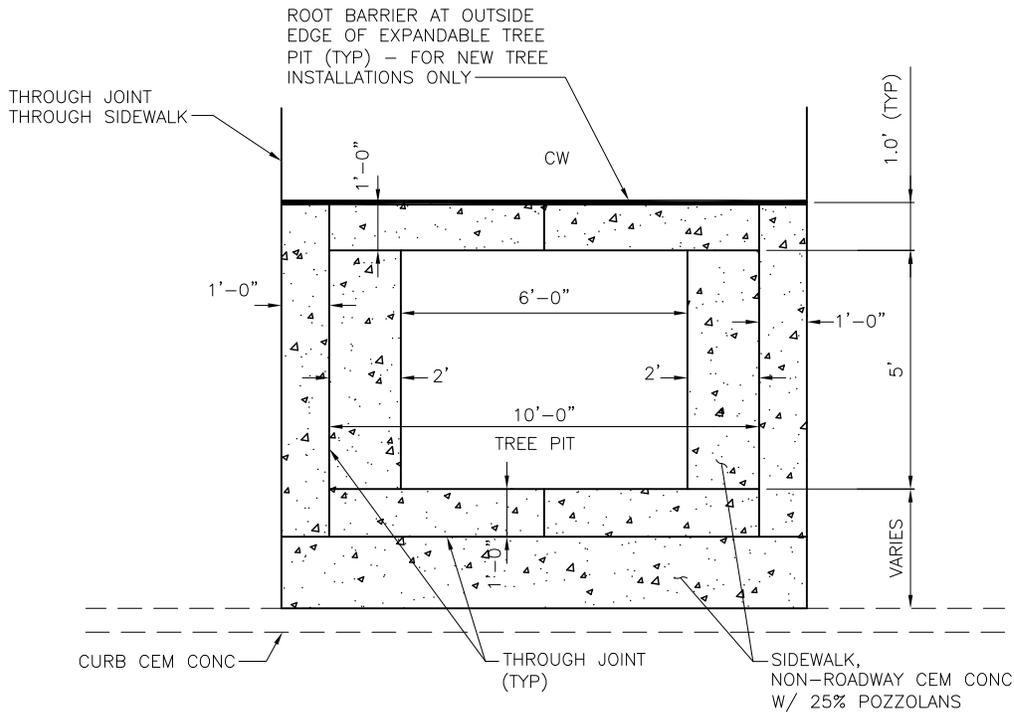
City of Seattle

NOT TO SCALE

CURB RAMP DETAILS



TYPE A



TYPE B

NOTES:

1. SEE STD PLAN 420 FOR CW SCORING DETAILS.
2. INSTALL ROOT BARRIER PER STANDARD PLAN NO 100a.

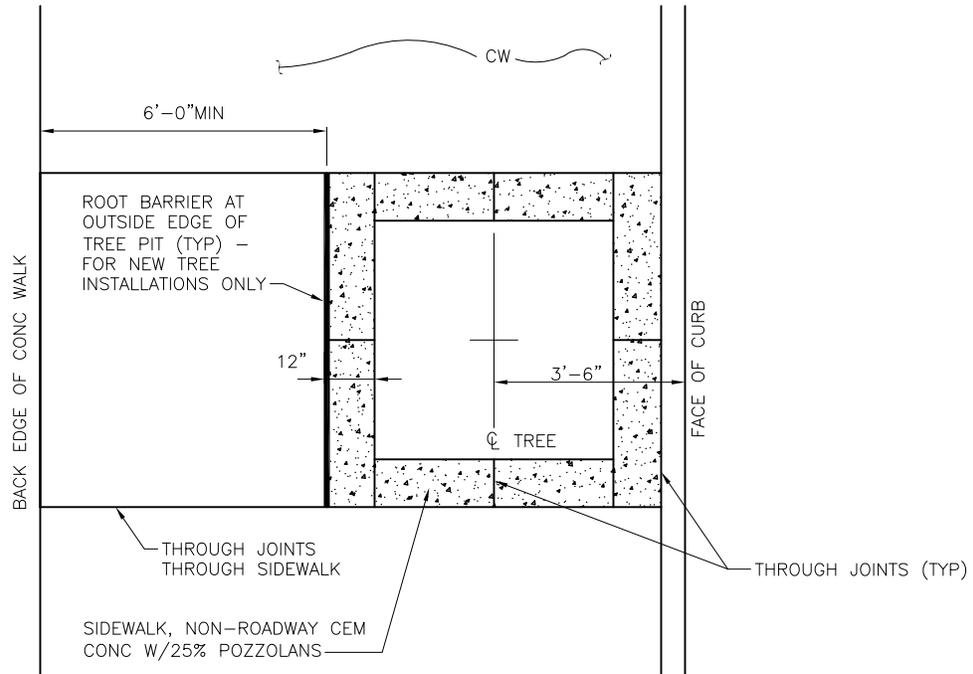
REF STD SPEC SEC 8-02 & 8-14



City of Seattle

NOT TO SCALE

EXPANDABLE TREE PIT DETAIL



FOR ADDITIONAL SIDEWALK SCORING REQUIREMENTS
SEE STD PLAN NO 420

TYPE C

TREE PIT DIMENSIONAL REQUIREMENTS:

- 24 SQ FT MIN TREE PIT SIZE
- 3'-0" MIN REQ'D BETWEEN TREE ϕ & FACE OF CURB
- 2'-0" MIN REQ'D BETWEEN TREE ϕ & CONC SIDEWALK
- 6'-0" MIN CONC WALKING SURFACE

NOTES:

1. INSTALLATIONS REQUIRING LESS THAN STANDARD MIN CLEARANCES SHALL BE ALLOWED ONLY WITH APPROVAL BY THE ENGINEER.
2. INSTALL ROOT BARRIER AS NOTED. SEE STANDARD PLAN NO 100a.
3. SEE STD PLAN NO 420 FOR CW SCORING DETAILS.

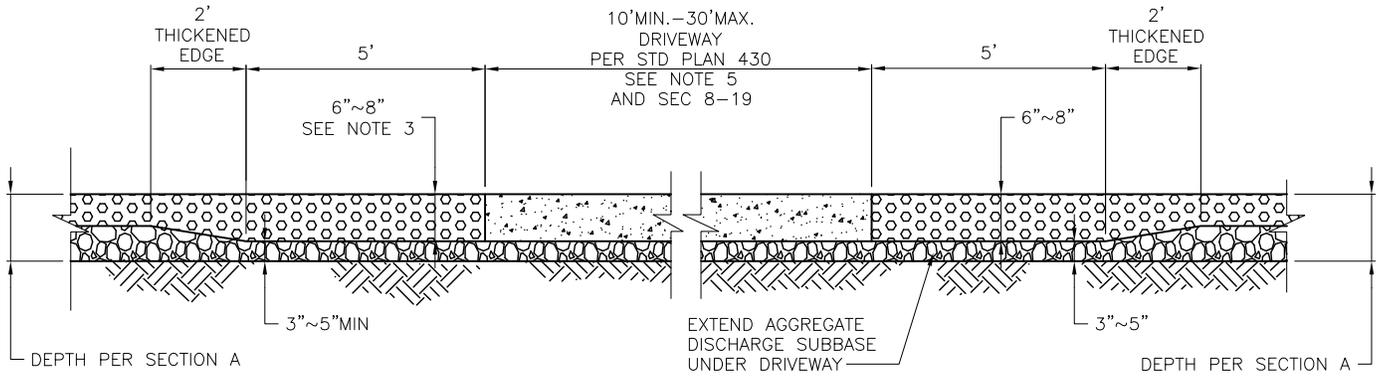
REF STD SPEC SEC 8-02 & 8-14



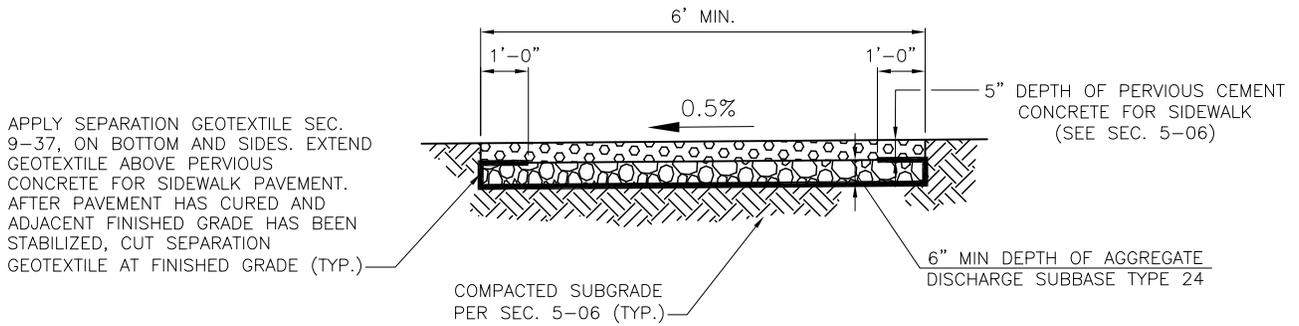
City of Seattle

NOT TO SCALE

TREE PIT DETAIL



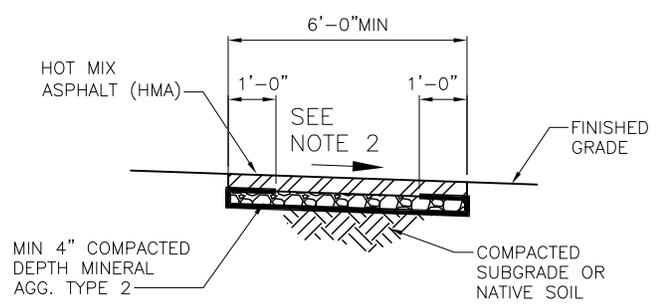
PERVIOUS CONC CEM SIDEWALK DEPTH TRANSITION AT DRIVEWAYS PROFILE VIEW



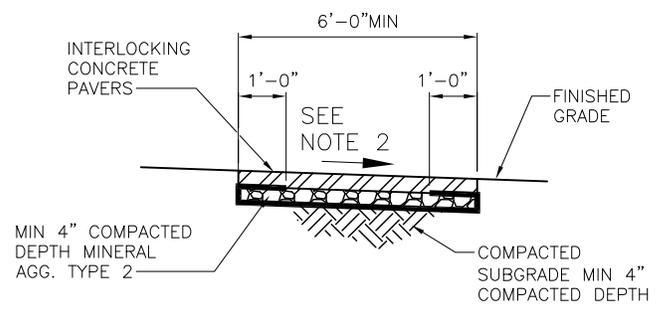
PERVIOUS CONC SECTION A

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 SHALL BE 8" MIN.
4. 5% MAX. PERVIOUS CEMENT CONCRETE PROFILE GRADE.



HOT MIX ASPHALT PAVEMENT SIDEWALK SECTION



CONCRETE PAVER SIDEWALK SECTION

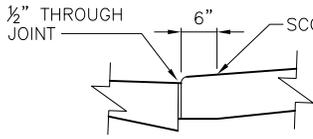
REF STD SPEC SEC 5-04, 5-06



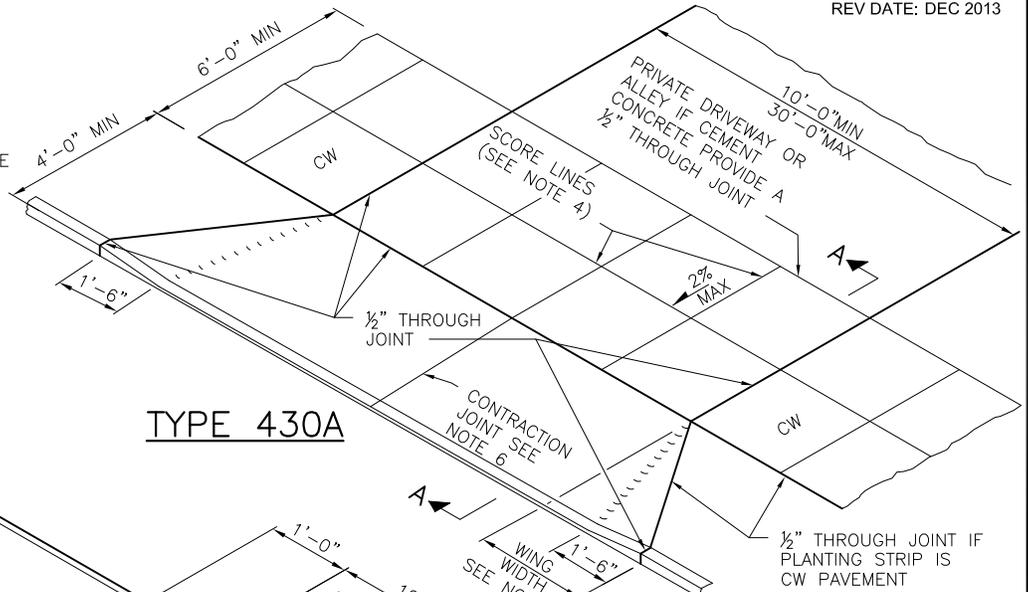
City of Seattle

NOT TO SCALE

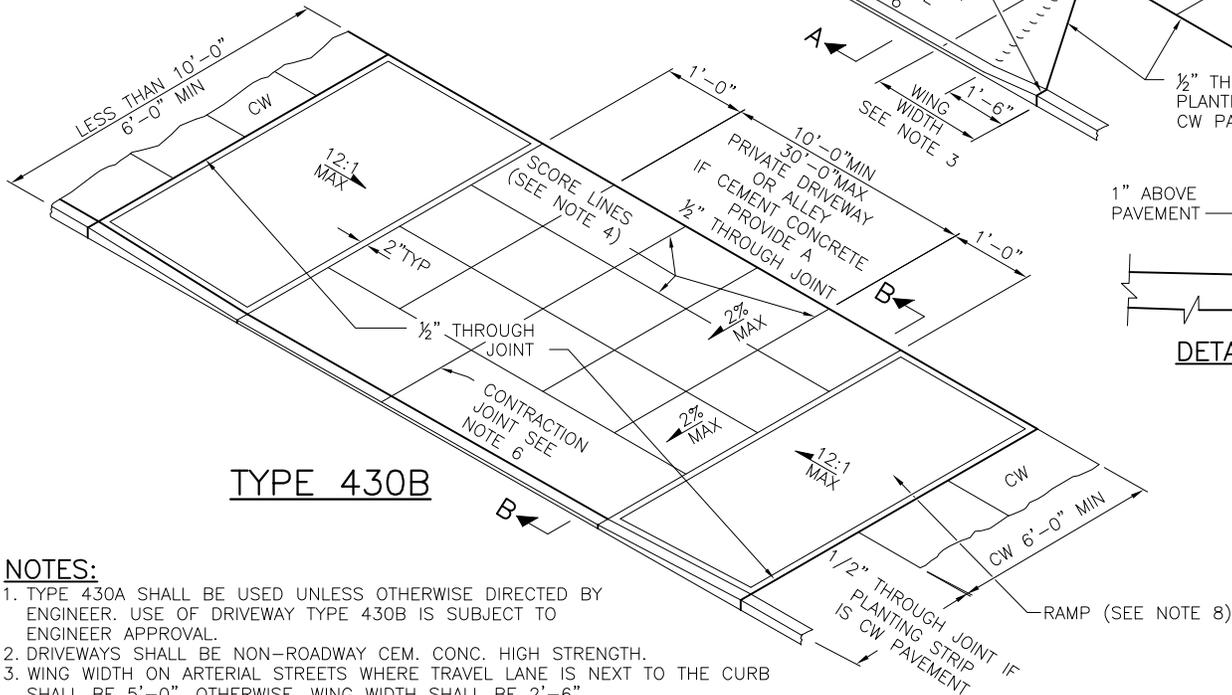
ALTERNATIVE WALKWAYS



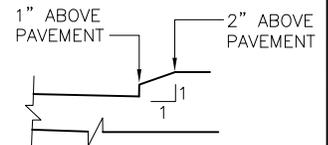
DETAIL B
DRIVENY W/ MONOLITHIC CURB & APPROACH



TYPE 430A



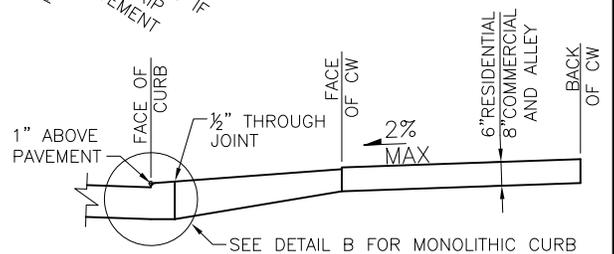
TYPE 430B



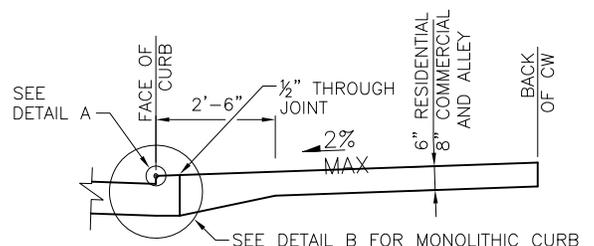
DETAIL A

NOTES:

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



SECTION A-A



SECTION B-B

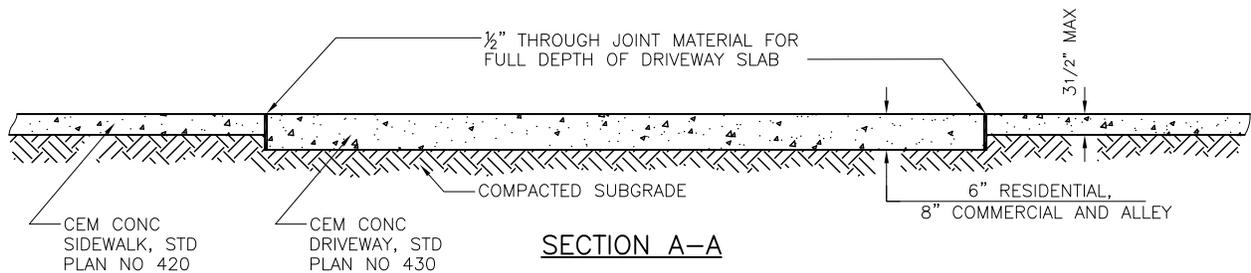
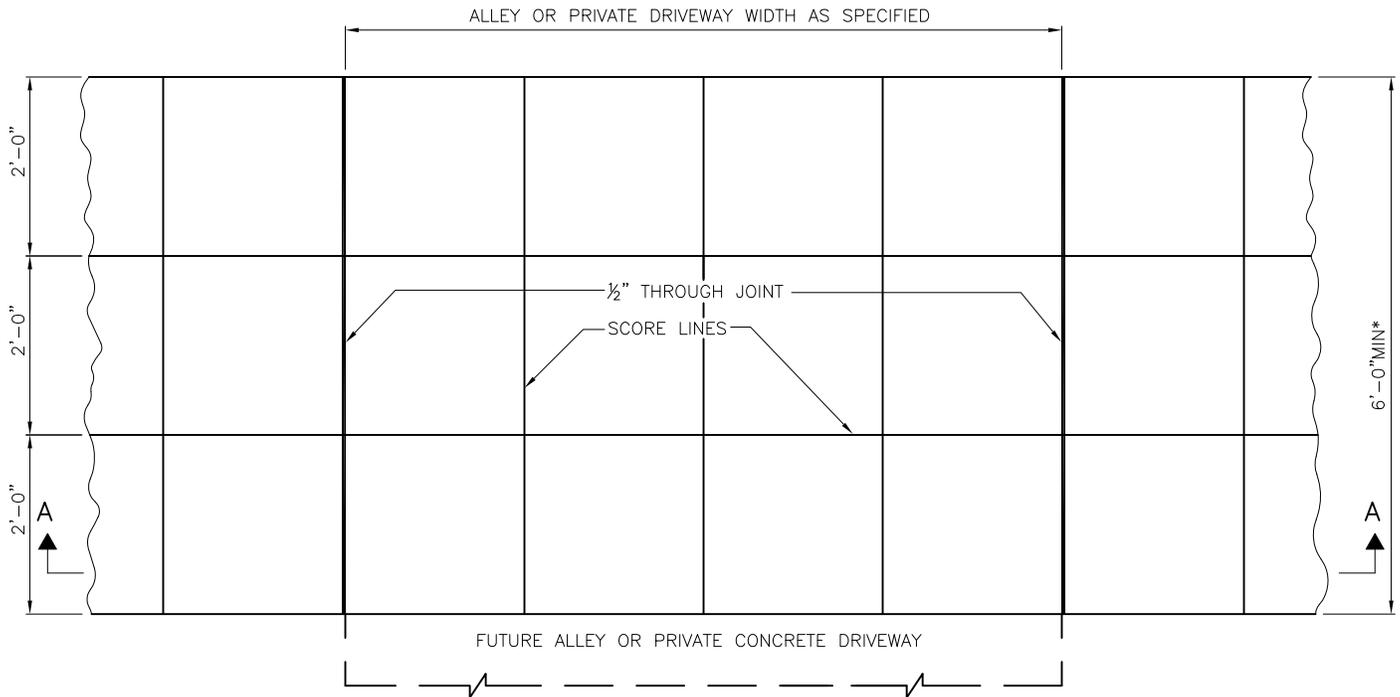
REF STD SPEC SEC 8-19



City of Seattle

NOT TO SCALE

TYPE 430 DRIVEWAY



* UNLESS OTHERWISE APPROVED BY SDOT.

NOTES:

1. DRIVEWAY WIDTH GREATER THAN 15'-0" AND LESS THAN OR EQUAL TO 30' SHALL HAVE TRANSVERSE CONSTRUCTION JOINTS AT IT'S CENTER.
2. DRIVEWAY GREATER THAN 30'-0" REQUIRES SDOT APPROVAL AND SHALL HAVE TRANSVERSE CONTRACTION JOINTS EVENLY PLACED SO THE DISTANCE BETWEEN CONTRACTION JOINTS, OR BETWEEN THE EDGE THROUGH JOINTS AND CONTRACTION JOINTS IS NOT GREATER THAN 15'-0".
3. PROVIDE SCORE LINES PER STD PLAN NO 420 AND THE DRAWINGS.

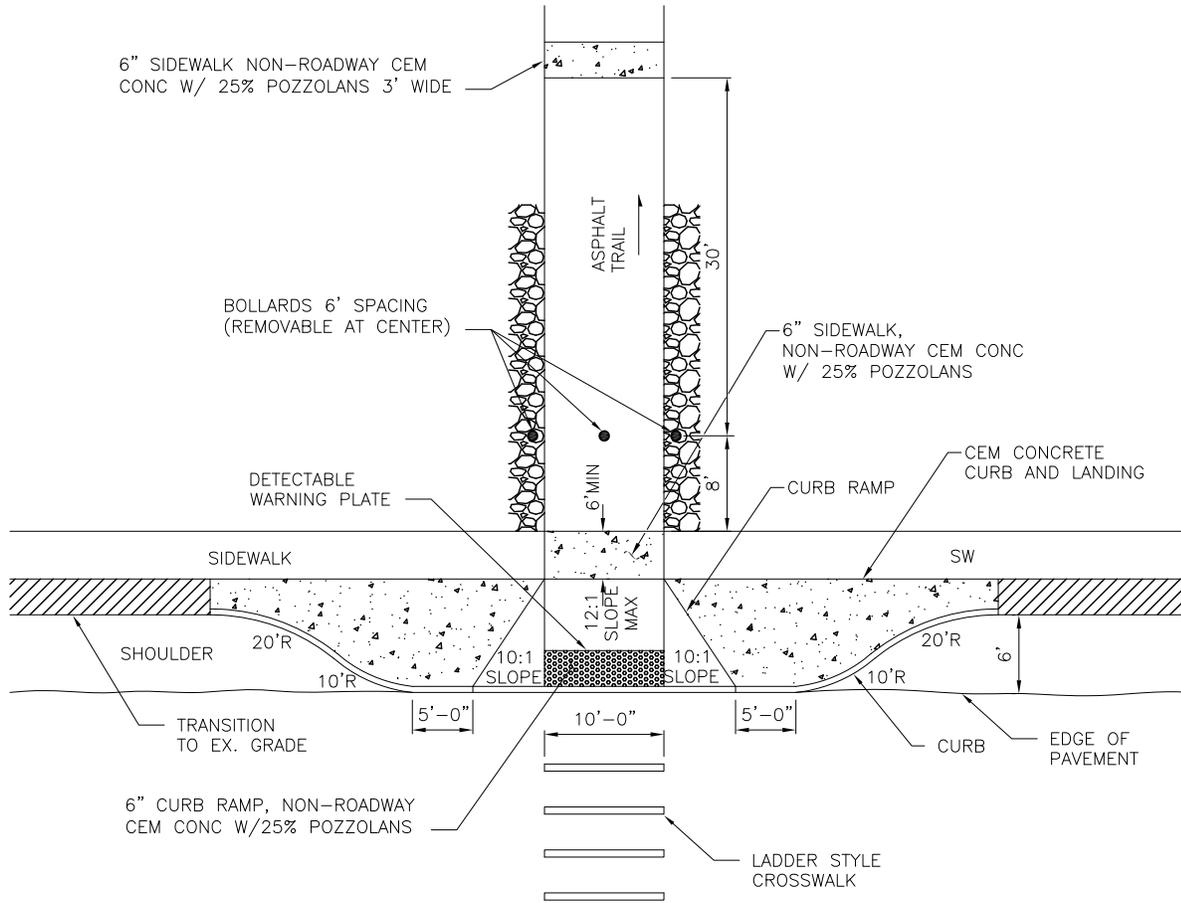
REF STD SPEC SEC 8-14 & 8-19



City of Seattle

NOT TO SCALE

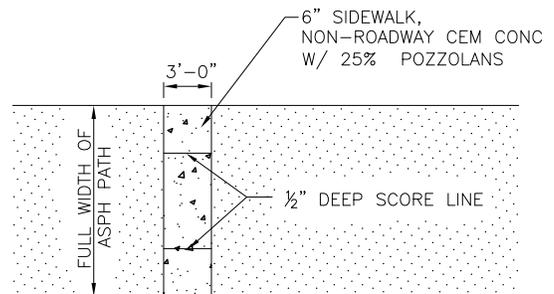
**CEMENT CONCRETE DRIVEWAY
PLACED WITH CEMENT
CONCRETE SIDEWALK**



MULTI PURPOSE TRAIL AT ARTERIAL STREET W/BULB-OUT (TYP)

NOTES:

1. FOR CURB RAMP AND DETECTABLE WARNING DETAILS SEE STANDARD PLAN NO 422.
2. FOR CROSSWALK DETAILS SEE STANDARD PLAN NO 712.
3. FOR BOLLARD DETAIL SEE STANDARD PLAN NO 463.
4. ASPHALT TRAIL CROSS SLOPE MINIMUM 1%, MAXIMUM 2%.
5. CEMENT CONCRETE WARNING PAD THICKNESS TO MATCH ASPHALT THICKNESS OR MINIMUM 6" THICK WHICHEVER IS GREATER.
6. CRUSHED ROCK ON EDGE OF TRAIL AS NEEDED TO DISBURSE DRAINAGE FLOW.
7. ALL CHANGES IN LEVEL ACROSS JOINTS SHALL BE FLUSH WITH A MAXIMUM DIFFERENCE IN ELEVATION OF 3/16 INCH.
8. ALL SLOPE GRADES SHALL BE MEASURED OFF THE HORIZON-LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE CONTRACTOR SHALL MAKE MINIMUM ADJUSTMENTS TO THE GRADES TO ACCOMMODATE EXISTING SITE CONDITIONS, ADJUSTMENTS ARE SUBJECT TO APPROVAL BY THE ENGINEER.
9. ALL CEMENT CONCRETE WARNING PADS SHALL BE BRUSHED FINISHED AND "V" GROOVED TO MATCH PATTERN IN ADJACENT OR NEARBY SIDEWALKS.



CEM CONC WARNING PAD

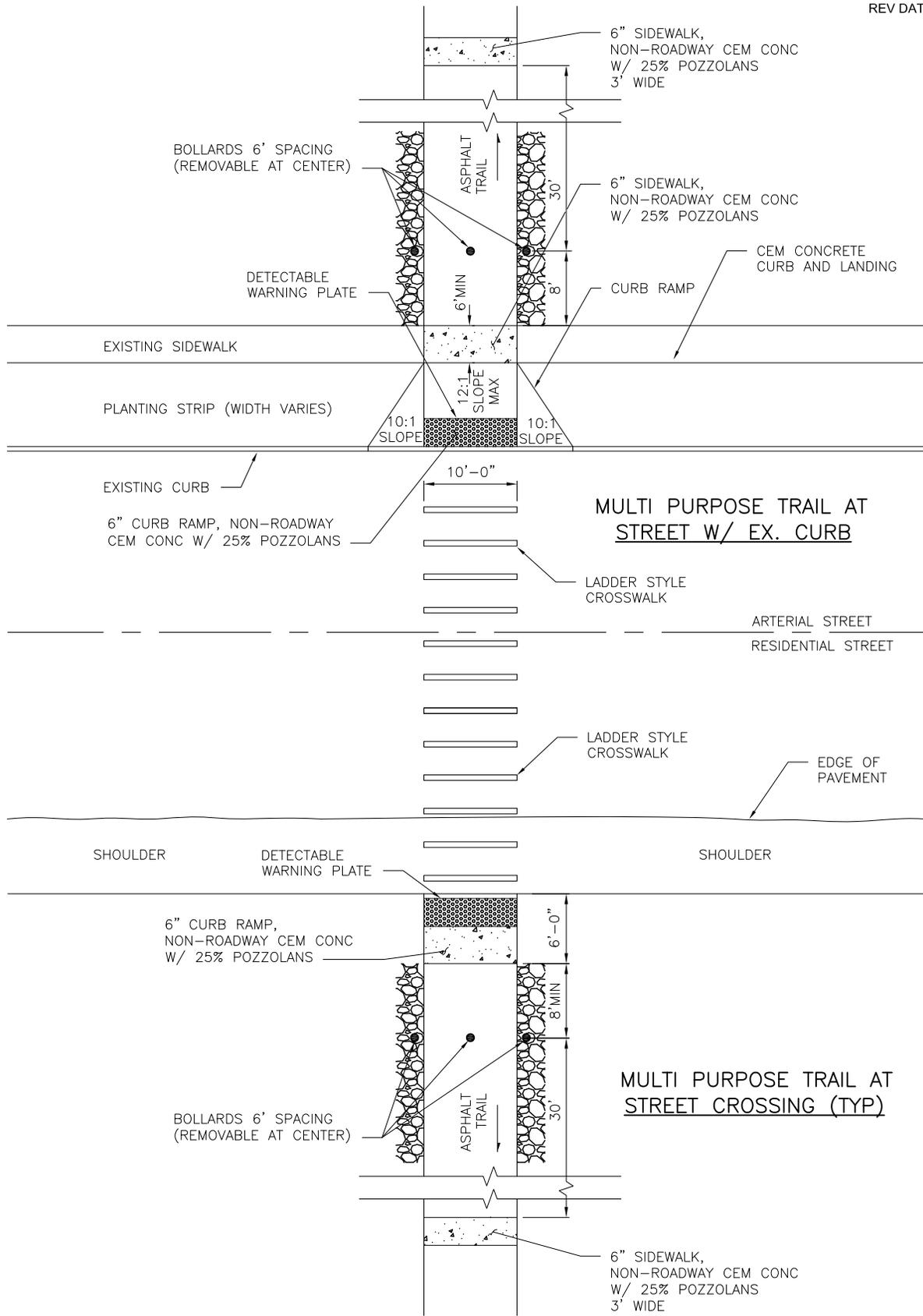
REF STD SPEC SEC



City of Seattle

NOT TO SCALE

MULTI-PURPOSE TRAIL
AT STREET CROSSING



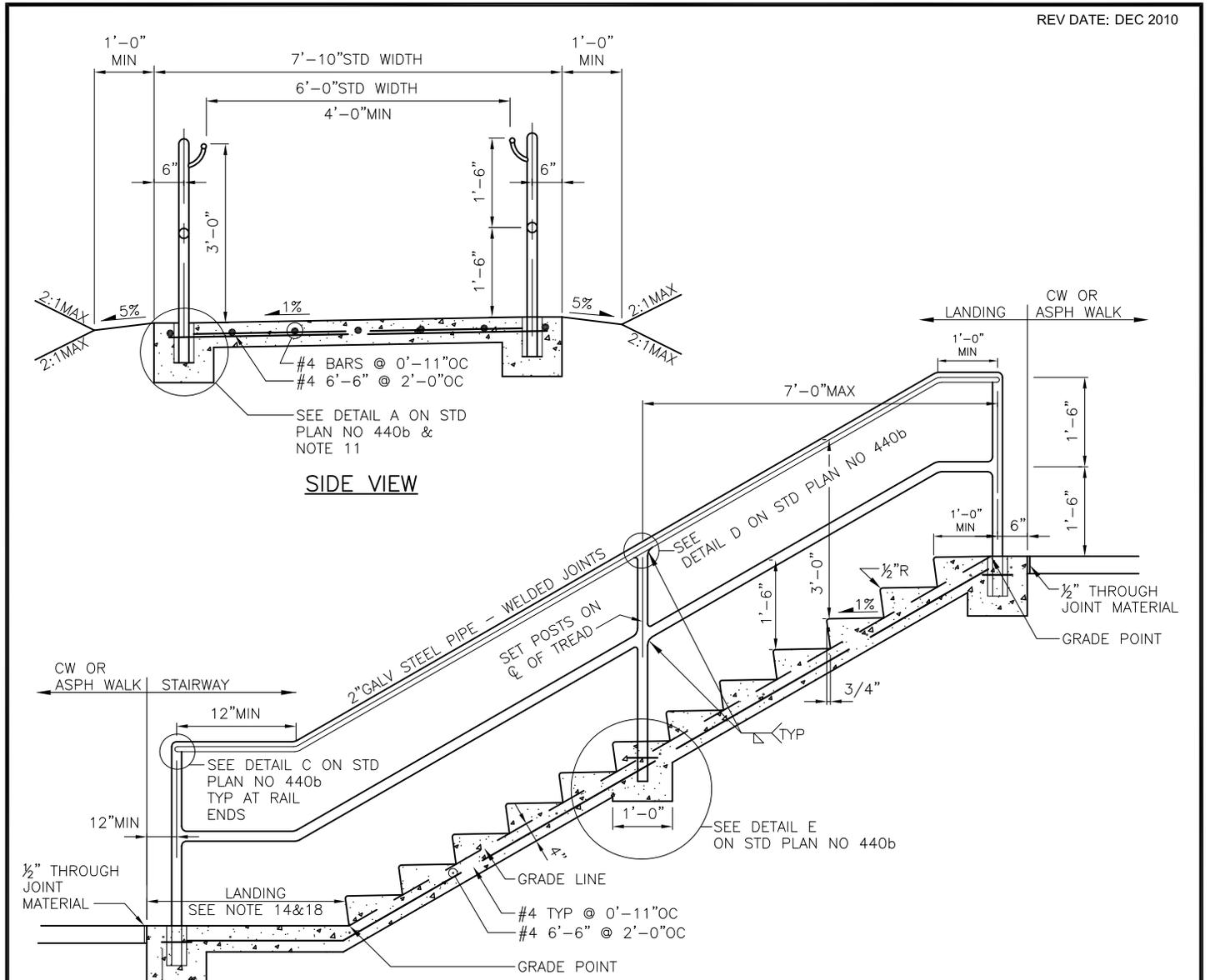
REF STD SPEC SEC



City of Seattle

NOT TO SCALE

MULTI-PURPOSE TRAIL AT STREET CROSSING



NOTES:

1. FLIGHTS OF STAIRS SHALL HAVE MAX VERTICAL RISE OF 12' BEFORE A LANDING.
2. AVOID FEWER THAN 2 RISERS PER FLIGHT.
3. STEPS IN FLIGHT MUST HAVE UNIFORM TREAD RUNS AND UNIFORM RISER HEIGHTS WITH TOLERANCE OF $\pm 3/8$ ".
4. TREADS SHALL BE 11"MIN, 12"MAX. RISERS SHALL BE 5"MIN, 7"MAX.
5. LANDINGS BETWEEN FLIGHTS OF STAIRS MUST HAVE SAME WIDTH AS STEPS AND A MIN LENGTH OF 4'-0".
6. FLIGHTS OF 2' OR MORE STEPS SHALL HAVE HANDRAILS ON BOTH SIDES.
7. HANDRAILS SHALL BE CONTINUOUS ACROSS LANDINGS BETWEEN FLIGHTS OF STEPS.
8. HANDRAILS SHALL BE GALVANIZED AFTER FABRICATION.
9. PIPE MATERIAL SHALL BE ASTM A53.
10. REINFORCING STEEL SHALL BE ASTM A615 GR 60.
11. FOR FORMAL DRAINAGE PICK-UP SEE DETAIL B ON STD PLAN NO 440b (THIS IS OPTIONAL AND MUST BE CALLED OUT ON DRAWINGS).
12. PIPE DIAMETERS SHOWN ARE "NOMINAL" DIAMETERS AS GIVEN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.
13. CONCRETE CLASS CL3000.
14. LANDINGS SHALL BE 0.5%MIN FOR A MIN OF 4', ADJACENT SIDE WALK MAY BE PART OF LANDING IF SLOPE CRITERIA AND SETBACKS FROM HANDRAILS ARE MET.
15. TREAD SURFACE SHALL HAVE GROOVES AT THE NOSE FOR TRACTION.
16. IF LANDING IS ELEVATED, LANDING SHALL HAVE GUARDRAIL.
17. STAIRWAYS DEVIATING FROM STANDARD PLAN TO ACCOMMODATE BICYCLE FEATURES MAY BE USED UPON REVIEW.
18. BOTTOM LANDING DIMENSION FROM THE RAILING TO THE NOSE OF THE TREAD SHALL BE 2'-0"MIN + 1 TREAD WIDTH.

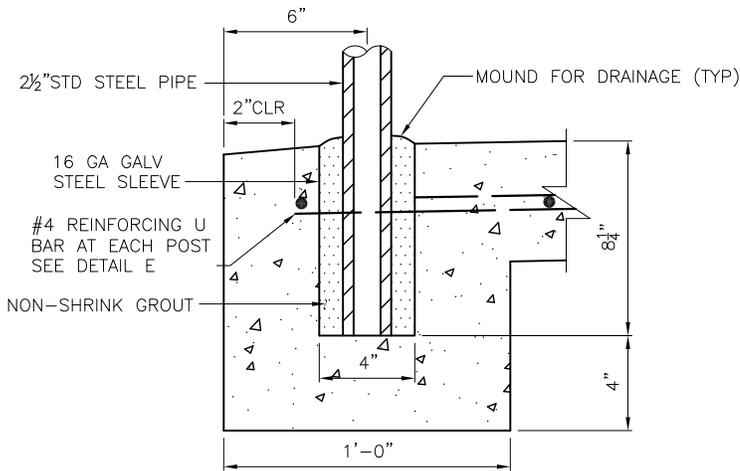
REF STD SPEC SEC 8-18



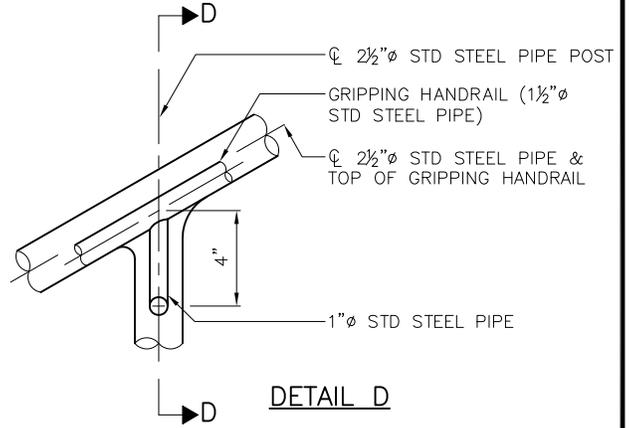
City of Seattle

NOT TO SCALE

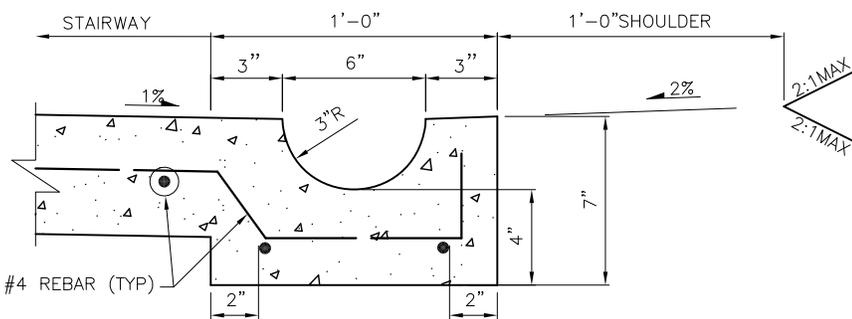
**CEMENT CONCRETE
STAIRWAY & HANDRAIL**



DETAIL A

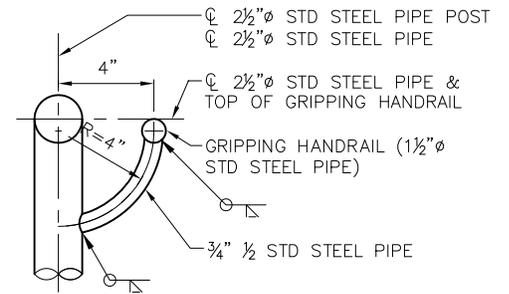


DETAIL D

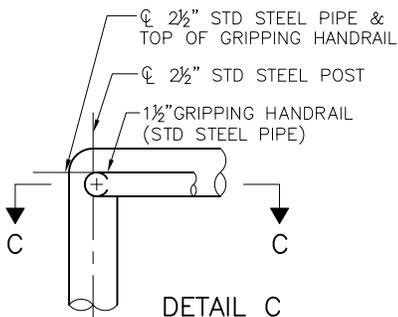


DETAIL B

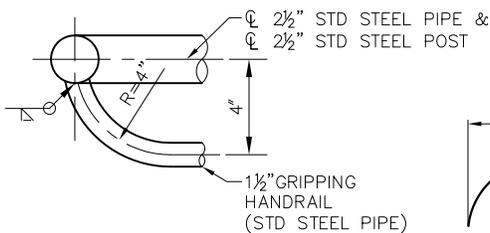
SEE NOTE 11 ON STD PLAN NO 440a



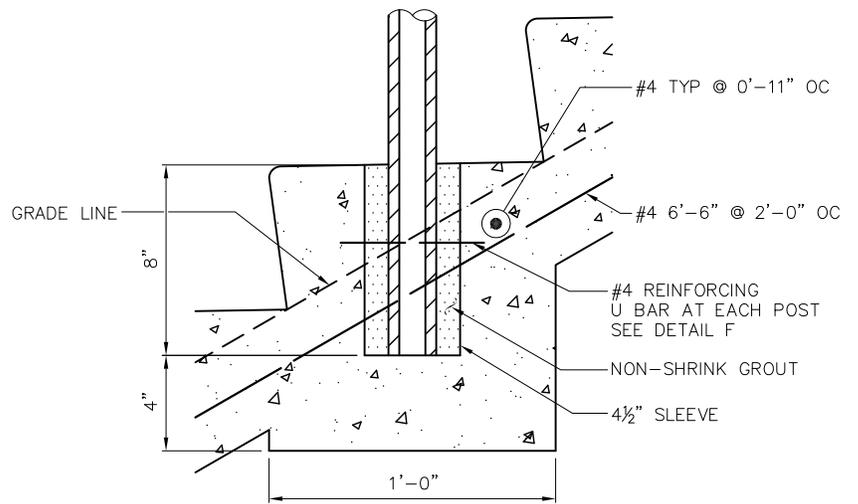
SECTION D-D



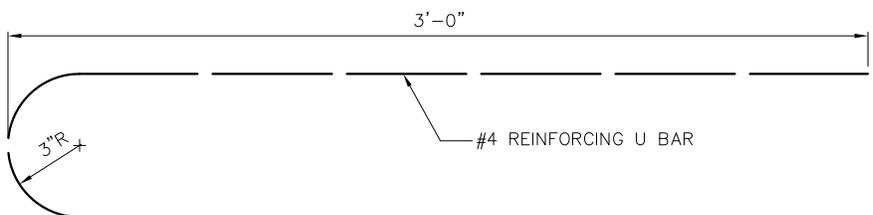
DETAIL C



SECTION C-C



DETAIL E



DETAIL F

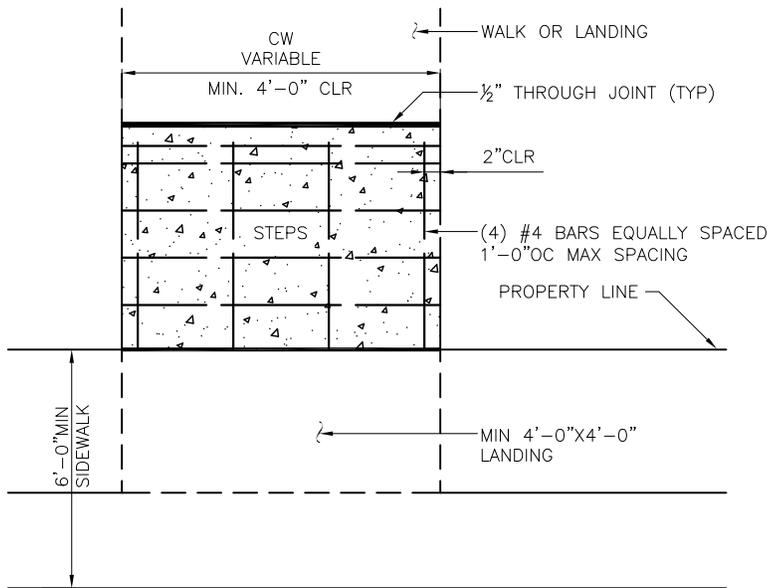
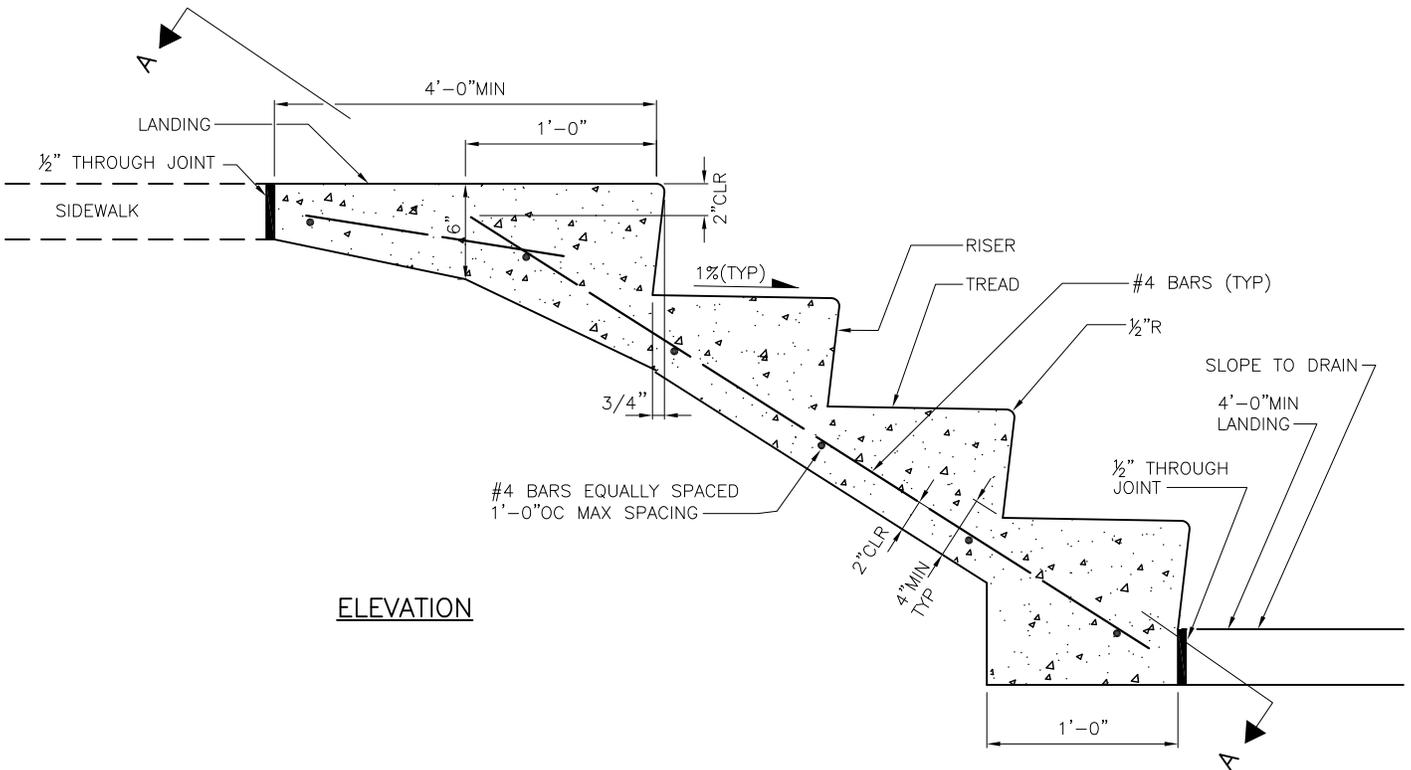
REF STD SPEC SEC 8-18



City of Seattle

NOT TO SCALE

CEMENT CONCRETE
STAIRWAY & HANDRAIL



NOTES:

1. CEMENT CONCRETE SHALL BE CL 3000 TROWEL FINISH
2. NUMBER OF STEPS SHALL SUIT INDIVIDUAL CONDITIONS WITH UNIFORM TREAD AND RISER DIMENSIONS AS FOLLOWS:
TREADS SHALL BE 11" MIN - 1'-0" MAX
RISERS SHALL BE 5" MIN - 7" MAX
3. STEP WIDTH SHALL MATCH WIDTH OF EXISTING WALK, BUT SHALL BE NO LESS THAN 2'-6" WIDE
4. ALL STAIRWAYS WITH 2 OR MORE STEPS SHALL INCLUDE A HANDRAIL ON BOTH SIDES. SEE STD PLAN NO 440
5. REINFORCING STEEL ASTM A 615 GR60
6. TREAD SLOPES OUTWARD @1%

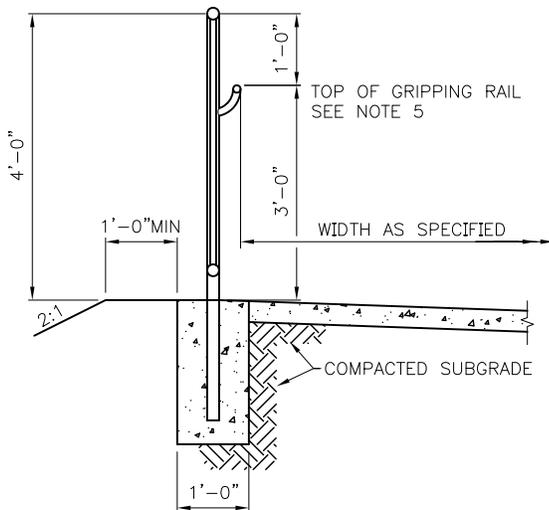
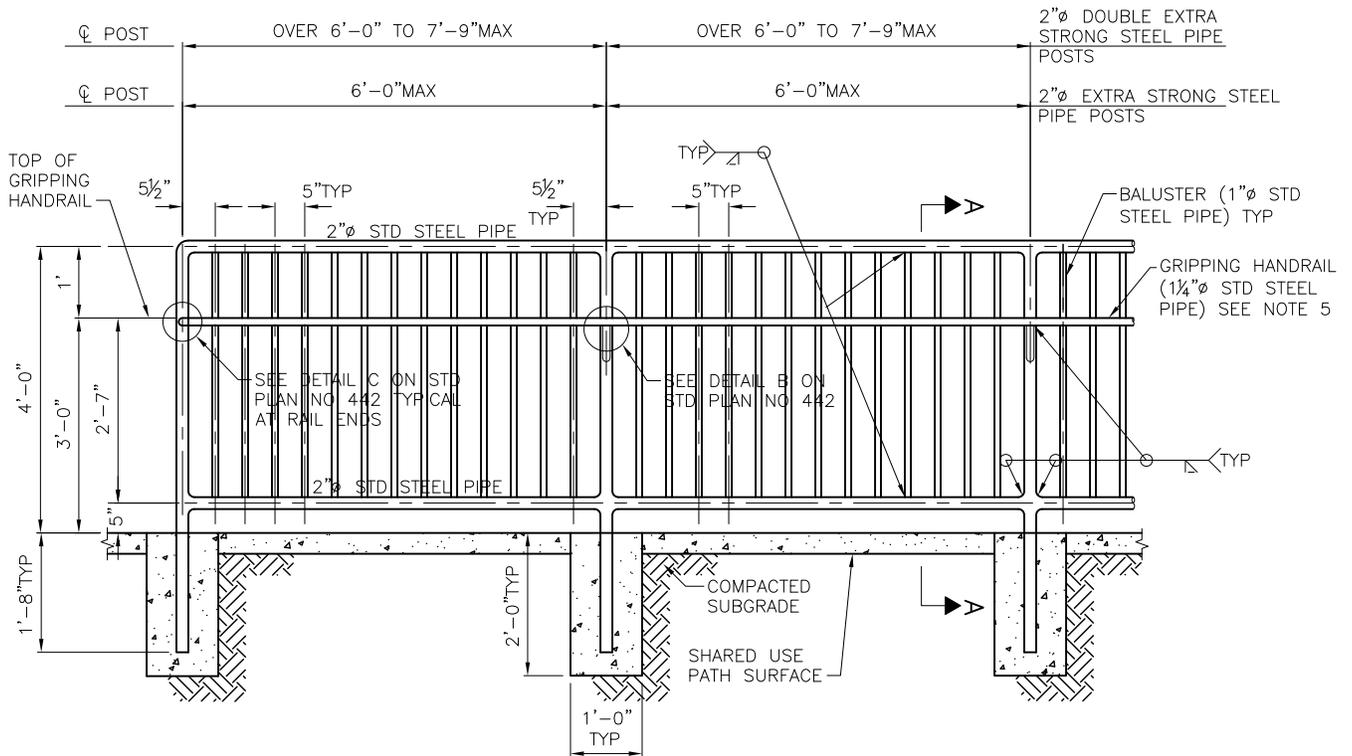
REF STD SPEC SEC 8-18



City of Seattle

NOT TO SCALE

CEMENT CONCRETE STEPS



SECTION A-A

NOTES:

1. RAILING SHALL BE HOT DIP GALVANIZED AFTER FABRICATION
2. ALL POSTS AND BALUSTERS SHALL BE PLUMB AND RAILS PARALLEL TO GRADE
3. PIPE MATERIAL SHALL 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

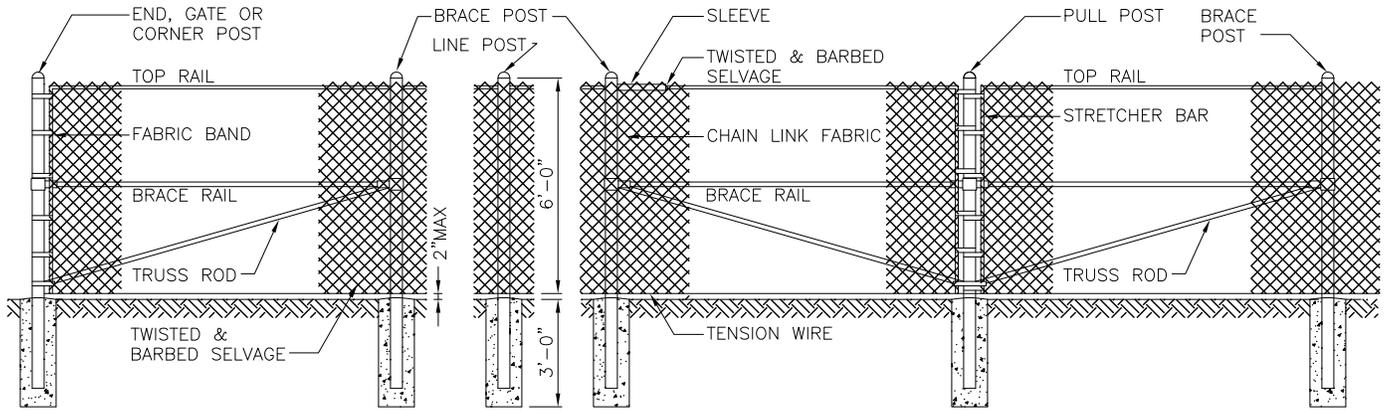
REF STD SPEC SEC 8-18



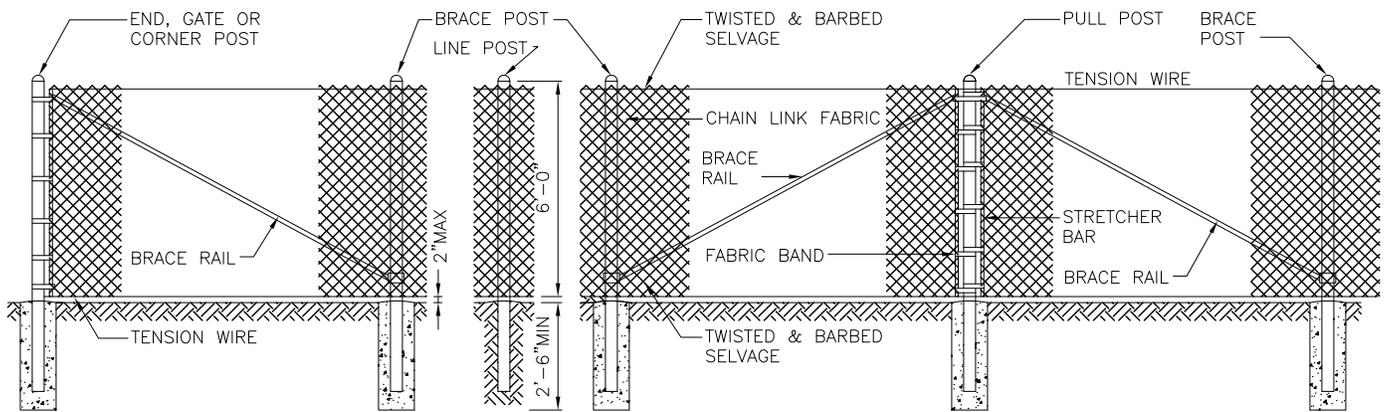
City of Seattle

NOT TO SCALE

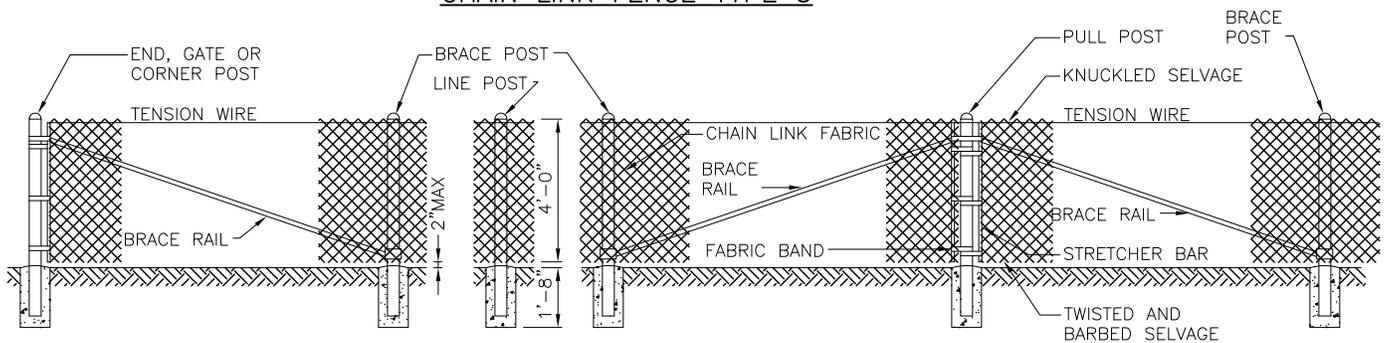
VERTICAL RAILING



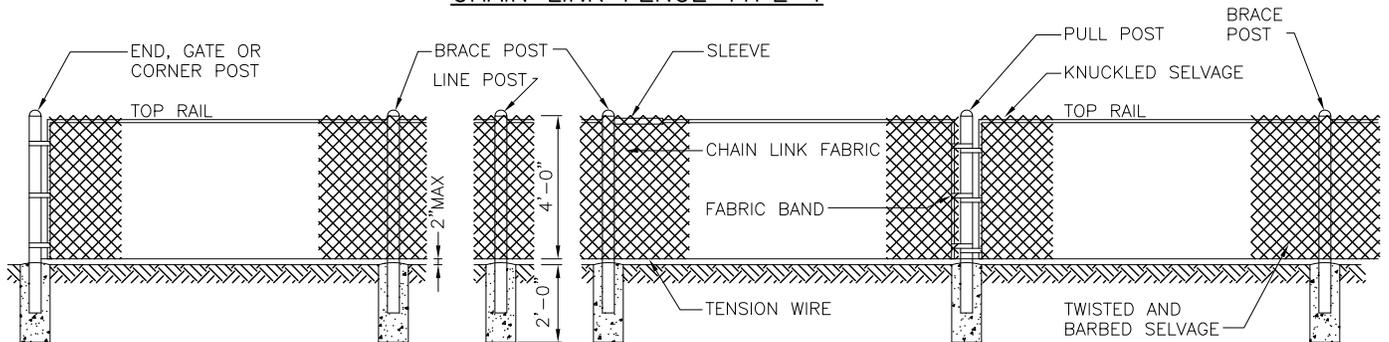
CHAIN LINK FENCE TYPE 1



CHAIN LINK FENCE TYPE 3



CHAIN LINK FENCE TYPE 4



CHAIN LINK FENCE TYPE 6

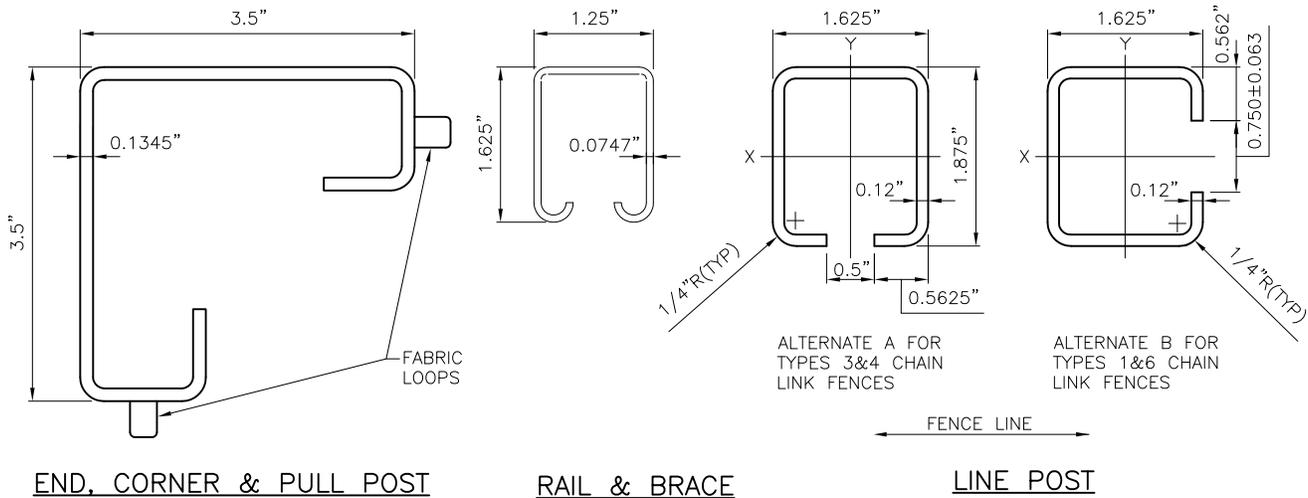
REF STD SPEC SEC 8-12



City of Seattle

NOT TO SCALE

CHAIN LINK FENCE



ROLL FORMED SECTIONS

MEMBER

TYPE	BRACE RAIL & TOP RAIL						LINE & BRACE POST					
	ROUND		H-COLUMN		ROLL FORMED		ROUND		H-COLUMN		ROLL FORMED	
	ID PIPE INCHES	WEIGHT PER FT POUNDS	SIZE INCHES	WEIGHT PER FT POUNDS	SIZE INCHES	WEIGHT PER FT POUNDS	ID PIPE INCHES	WEIGHT PER FT POUNDS	SIZE INCHES	WEIGHT PER FT POUNDS	SIZE INCHES	WEIGHT PER FT POUNDS
1	1.25	2.27	1.25X1.62	1.35	1½X1¼	1.35	2	3.65	2¼	4.0		
3							1½	2.72	1⅞	2.72	1⅞X1⅞	2.34
4							1½	2.72	1⅞	2.72	1⅞X1⅞	2.34
6							1.25X1.62	1.35	2	3.65	2¼	4.0

MEMBER

TYPE	END, CORNER & PULL POSTS				GATE POST ROUND		ALL POSTS
	ROUND		H-COLUMN		SIZE INCHES	WEIGHT PER FT POUNDS	
	ID PIPE INCHES	WEIGHT PER FT POUNDS	SIZE INCHES	WEIGHT PER FT POUNDS			LENGTH
1	2½	5.79	3½X3½	5.14	3½	9.1	8'-8"
3	2	3.65					8'-8"
4	2	3.65					5'-6"
6	2½	5.79					5'-6"

NOTES:

- ALL CONCRETE POST BASES SHALL BE 10" MINIMUM DIAMETER, CL3000
- POSTS SHALL BE SPACED AT 10'-0" MAXIMUM INTERVALS UNLESS OTHERWISE DIRECTED BY THE ENGINEER
- TOP OR BOTTOM TENSION WIRES SHALL BE PLACED WITHIN THE LIMITS OF THE FIRST FULL FABRIC WEAVE
- THE ILLUSTRATIVE DETAIL SHOWN HEREON SHALL NOT BE CONSTRUED AS LIMITING TO HARDWARE DESIGN OR POST SELECTION FOR ANY PARTICULAR FENCE TYPE
- CONCRETE OR GROUT AROUND POST AT GROUND LINE SHALL BE MOUNDED FOR DRAINAGE

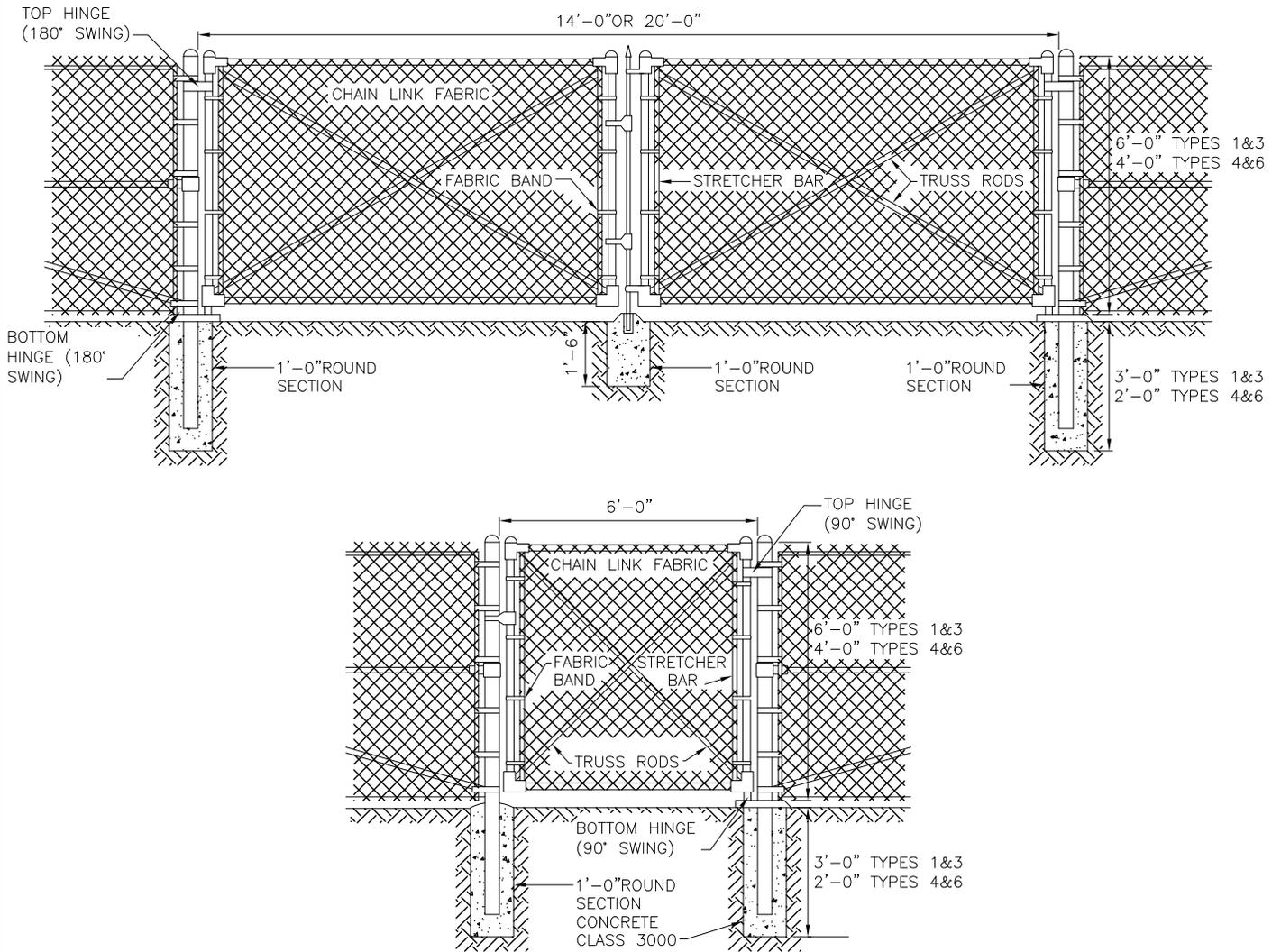
REF STD SPEC SEC 8-12



City of Seattle

NOT TO SCALE

CHAIN LINK FENCE



NOTES:

1. FENCE FABRIC SHALL BE SECURED TO GATE FRAMES WITH KNUCKLED SELVAGE ALONG TOP EDGE FOR TYPES 4&6 CHAIN LINK FENCE INSTALLATIONS
2. MINIMUM POST LENGTH:
 TYPES 1&3: 8'-8"
 TYPES 4&6: 5'-6"
3. CONCRETE OR GROUT AROUND POST AT GROUND LINE SHALL BE MOUNDED FOR DRAINAGE

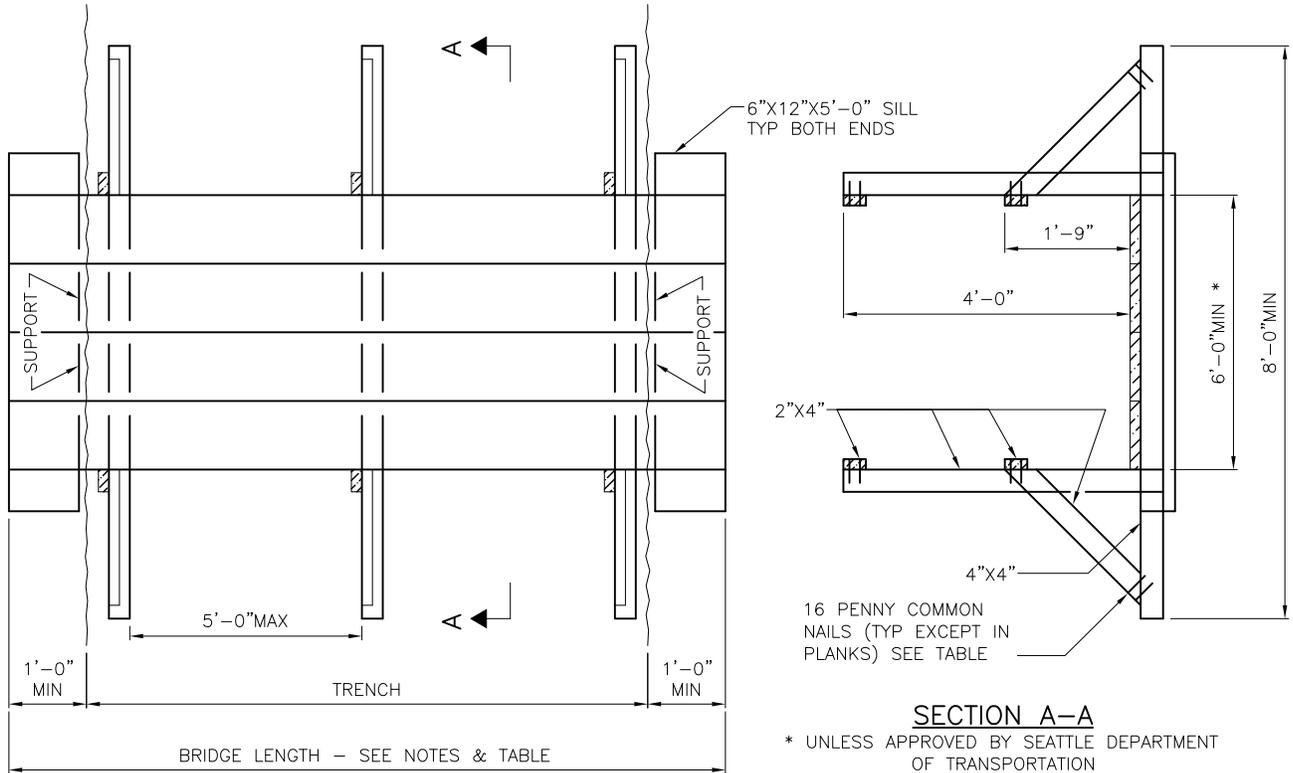
REF STD SPEC SEC 8-12



City of Seattle

NOT TO SCALE

CHAIN LINK GATES

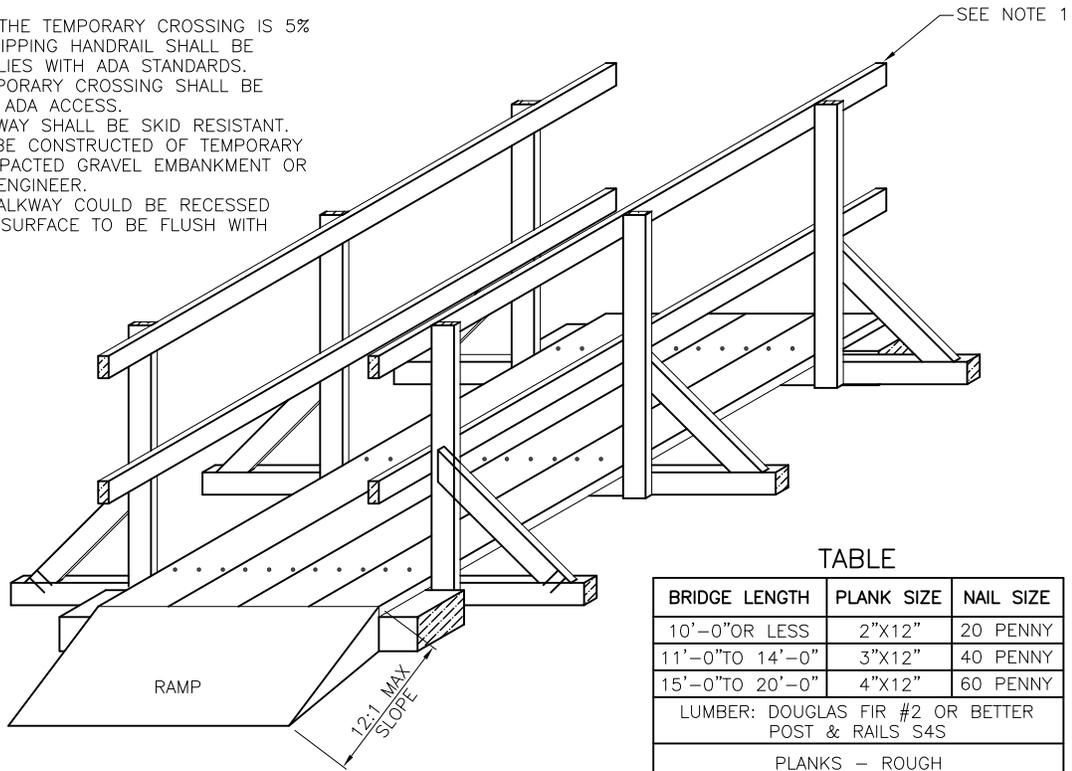


SECTION A-A

* UNLESS APPROVED BY SEATTLE DEPARTMENT OF TRANSPORTATION

NOTES:

1. IF THE SLOPE OF THE TEMPORARY CROSSING IS 5% OR GREATER, A GRIPPING HANDRAIL SHALL BE ADDED THAT COMPLIES WITH ADA STANDARDS.
2. ENDS OF THE TEMPORARY CROSSING SHALL BE SLOPED TO ALLOW ADA ACCESS.
3. SURFACE OF WALKWAY SHALL BE SKID RESISTANT.
4. THE RAMP SHALL BE CONSTRUCTED OF TEMPORARY PAVEMENT OR COMPACTED GRAVEL EMBANKMENT OR AS APPROVED BY ENGINEER.
5. THE TEMPORARY WALKWAY COULD BE RECESSED FOR THE WALKING SURFACE TO BE FLUSH WITH ADJOINING GRADE.



TABLE

BRIDGE LENGTH	PLANK SIZE	NAIL SIZE
10'-0" OR LESS	2"X12"	20 PENNY
11'-0" TO 14'-0"	3"X12"	40 PENNY
15'-0" TO 20'-0"	4"X12"	60 PENNY
LUMBER: DOUGLAS FIR #2 OR BETTER POST & RAILS S4S		
PLANKS - ROUGH		

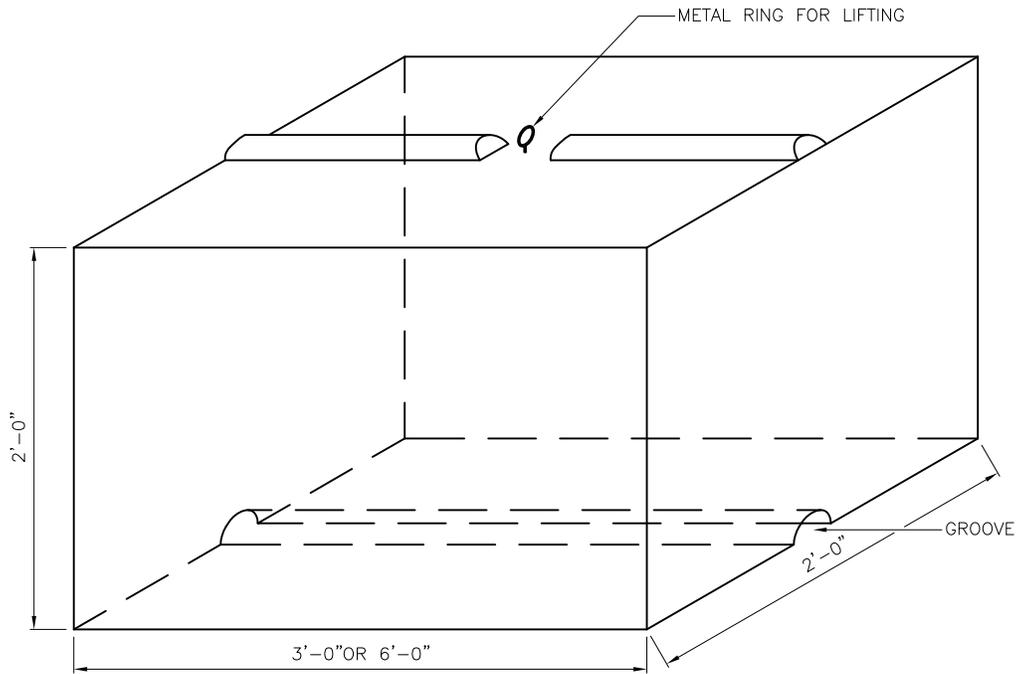
REF STD SPEC SEC 1-07.23



City of Seattle

NOT TO SCALE

TEMPORARY PEDESTRIAN WALKWAY



CONCRETE TONGUE & GROOVE BLOCK

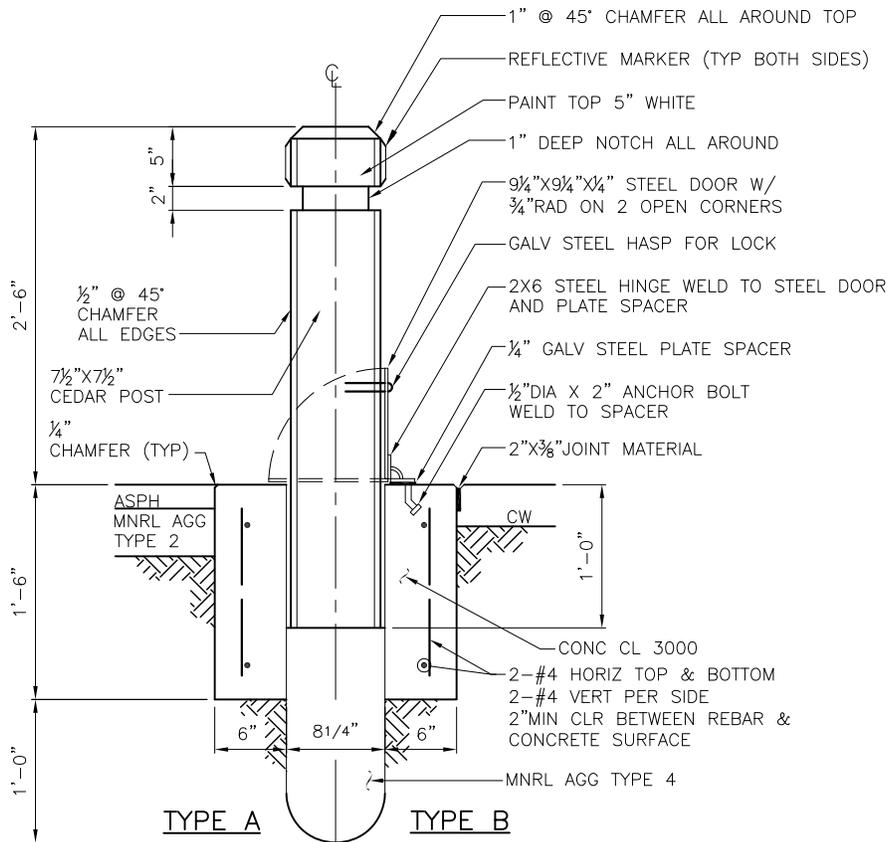
REF STD SPEC SEC



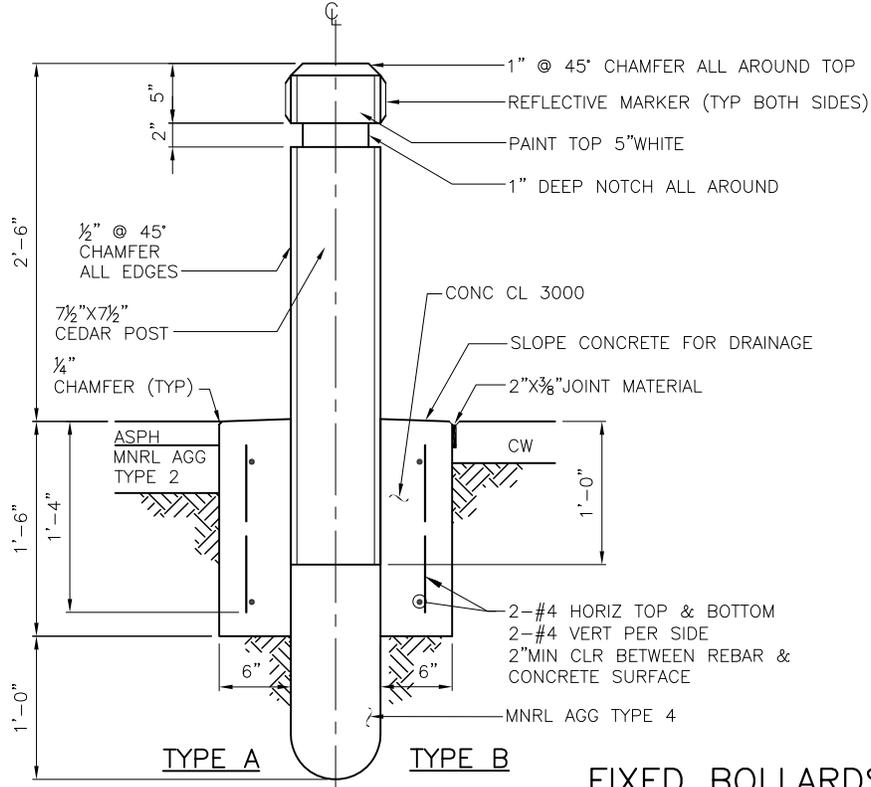
City of Seattle

NOT TO SCALE

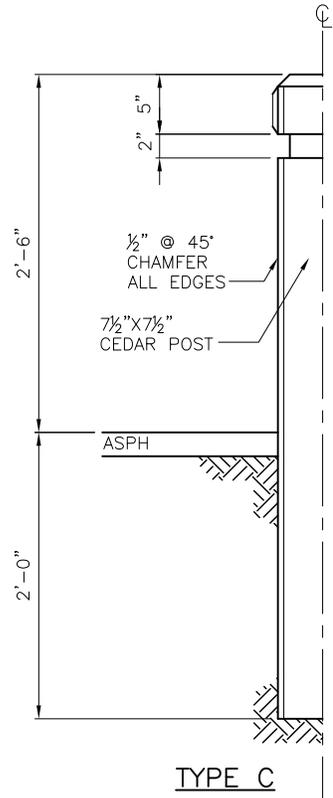
ECOLOGY BLOCK, CONCRETE



REMOVABLE BOLLARDS



FIXED BOLLARDS



TYPE C

REF STD SPEC SEC 8-02



City of Seattle

NOT TO SCALE

FIXED & REMOVABLE WOOD BOLLARD