

CONTRACT PROVISIONS AND PLANS

FOR THE CONSTRUCTION OF:

Phase 5B Project: Package 1 – Salmon Creek Treatment Plant Odor Control and Existing Facilities Improvements

VOLUME V – SCHEDULE A STANDARD DETAILS

Discovery Clean Water Alliance Project No. 92-2017-0053

A Discovery Clean Water Alliance Capital Project with
Clark Regional Wastewater District as Administrative Lead



CLARK REGIONAL WASTEWATER DISTRICT
8000 N.E. 52nd COURT
VANCOUVER, WASHINGTON 98665
(360) 750-5876
FAX (360) 750-7570
crwwd.com

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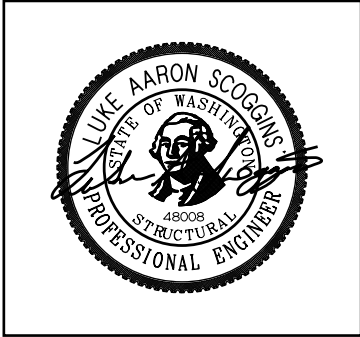
VOLUME V – SCHEDULE A STANDARD DETAILS

**FOR INFORMATION REGARDING
THIS PROJECT CONTACT:**

**Tom Lebo
Alliance Construction Program Manager
CLARK REGIONAL WASTEWATER DISTRICT
8000 N.E. 52nd COURT
VANCOUVER, WASHINGTON 98665
360.993.8816
tlebo@crwwd.com**

**STANDARD DETAILS
SEALS PAGE**

STANDARD DETAILS
SERIES 0300, 0400, 0500

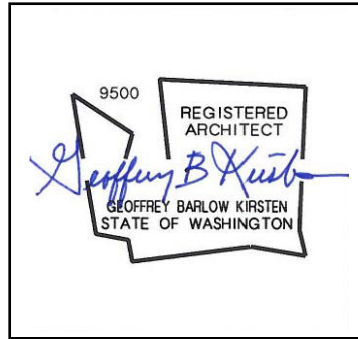


Luke Aaron Scoggins

SALMON CREEK TREATMENT
PLANT IMPROVEMENTS

STANDARD DETAILS

SERIES 0700, 0800, 1000, 1300



Geoffrey Barlow Kirsten

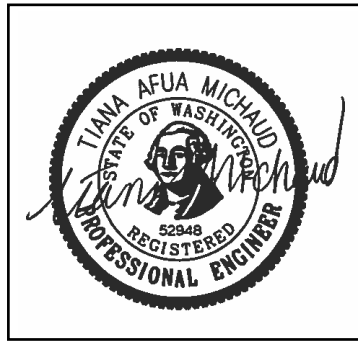
STANDARD DETAILS
SERIES 2200



Kenneth J. Galardi

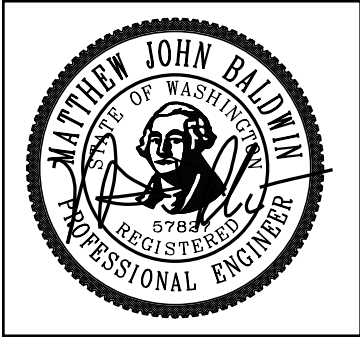
SALMON CREEK TREATMENT
PLANT IMPROVEMENTS

STANDARD DETAILS
SERIES 2600



Tiana Afua Michaud

STANDARD DETAILS
SERIES 3100, 3200, 3300



Matthew John Baldwin

SALMON CREEK TREATMENT
PLANT IMPROVEMENTS

STANDARD DETAILS
SERIES 4000



Craig W. Massie

SALMON CREEK PHASE 5B STANDARD DETAIL INDEX

DETAIL #	DETAIL DESCRIPTION
0300 Series	
0315-192	BUILDING SLAB ON GRADE SAWN CONTROL JOINT
0330-001	OPENING REINFORCEMENT
0330-016	PIPE ENCASEMENT
0330-017	PIPE ENCASEMENT
0330-018	PIPE ENCASEMENT AT SLAB
0330-022	PIPE PENETRATION - EXISTING WALL (1 OF 3)
	PIPE PENETRATION - EXISTING WALL (2 OF 3)
	PIPE PENETRATION - EXISTING WALL (3 OF 3)
0330-056	CONCRETE EQUIPMENT PAD - TYPE 'A' (1 OF 7)
	CONCRETE EQUIPMENT PAD - TYPE 'B' (2 OF 7)
	CONCRETE EQUIPMENT PAD - TYPE 'E' (3 OF 7)
	CONCRETE EQUIPMENT PAD - TYPE 'F' (4 OF 7)
	CONCRETE EQUIPMENT PAD - TYPE 'G' (5 OF 7)
	CONCRETE EQUIPMENT PAD - TYPE 'H' (6 OF 7)
	CONCRETE EQUIPMENT PAD - NOTES (7 OF 7)
0330-057	ANCHOR BOLT DETAILS (1 OF 2)
	ANCHOR BOLT DETAILS (2 OF 2)
0330-061	PIPE SUPPORT - CONCRETE SADDLE (1 OF 4)
	PIPE SUPPORT - CONCRETE SADDLE (2 OF 4)
	PIPE SUPPORT - CONCRETE SADDLE (3 OF 4)
	PIPE SUPPORT - CONCRETE SADDLE (4 OF 4)
0330-083	DRAINAGE BLOCKOUT
0330-105	ADHESIVE DOWEL
0340-016	PIPE PENETRATION
0340-095	SPLASHBLOCK
0400 Series	
0420-104	PIPE PENETRATION
0422-001	REINFORCED MASONRY WALL CORNERS (SINGLE & DOUBLE MAT)
0422-003	CMU OPENING REINFORCEMENT (1 OF 2)
	CMU OPENING REINFORCEMENT (2 OF 2)
0422-004	SPECIAL REINFORCED MASONRY SHEAR WALL
0422-005	CMU WALL PIER
0422-006	CMU WALL COLUMN
0422-031	CMU CONTROL JOINT
0422-101	CMU WALL BASE
0423-002	GLASS BLOCK HEAD AND SILL

SALMON CREEK PHASE 5B STANDARD DETAIL INDEX

DETAIL #	DETAIL DESCRIPTION
0500 Series	
0512-001	COLUMN BASE - STEEL
0512-002	POST BASE - STEEL
0512-020	TYPICAL BEAM CONNECTION - STEEL
0512-022	BEAM SINGLE PLATE SHEAR CONNECTION - STEEL
0512-026	COPE BEAM CONNECTION - STEEL
0512-056	BEAM / WALL CONNECTION - STEEL (1 OF 2)
	BEAM / WALL CONNECTION - STEEL (2 OF 2)
0512-067	BEAM SEAT/EXTERIOR WALL - STEEL
0512-069	TOP OF WALL SUPPORT LEDGER
0514-020	TYPICAL BEAM CONNECTION - ALUMINUM
0514-056	BEAM / WALL CONNECTION - ALUMINUM (1 OF 2)
	BEAM / WALL CONNECTION - ALUMINUM (2 OF 2)
0531-001	DECKING LEDGER SUPPORT ANGLE
0531-021	ROOF DECK OPENING (1 OF 2)
	ROOF DECK OPENING (2 OF 2)
0551-041	STAIR DETAILS - STEEL (1 OF 5)
	STAIR DETAILS - STEEL (2 OF 5)
	STAIR DETAILS - STEEL (3 OF 5)
	STAIR DETAILS - STEEL (4 OF 5)
	STAIR DETAILS - STEEL (5 OF 5)
0551-042	STAIR LANDING WITH SUPPORTS - STEEL (1 OF 3)
	STAIR LANDING WITH SUPPORTS - STEEL (2 OF 3)
	STAIR LANDING WITH SUPPORTS - STEEL (3 OF 3)
0551-101	LADDER - ALUMINUM - PRE-ENGINEERED PIPE UNDER COVER - TYPE 'D'
0552-001	RAILING - 3 RAIL - ALUMINUM (1 OF 5)
	RAILING - 3 RAIL STAIR - ALUMINUM (IBC) (2 OF 5)
	RAILING POST ANCHORAGE TYPE 'A' - ALUMINUM (3 OF 5)
	RAILING POST ANCHORAGE TYPE 'B' - ALUMINUM (4 OF 5)
	RAILING POST ANCHORAGE TYPE 'C' - ALUMINUM (5 OF 5)
0553-001	STANDARD GRATING (1 OF 4)
	STANDARD GRATING (2 OF 4)
	STANDARD GRATING (3 OF 4)
	STANDARD GRATING (4 OF 4)
0558-002	BEAM SEAT CLOSURE PLATE

SALMON CREEK PHASE 5B STANDARD DETAIL INDEX

DETAIL #	DETAIL DESCRIPTION
0700 Series	
0753-002	COPING (MASONRY WALL)
0753-004	BASE FLASHING
0753-006	ROOF DRAIN (METAL DECK)
0753-007	OVERFLOW SCUPPER
0754-100	ROOF PENETRATION
0762-003	ROOF DRAIN NOZZLE
0762-006	LOW EAVE
0762-007	HIGH EAVE
0762-008	RAKE
0762-009	BASE OF WALL
0770-038	ROOF HATCH
0790-102	EXTERIOR WALL PENETRATION
0800 Series	
0811-003	DOOR HEAD
0811-004	DOOR JAMB
0811-101	DOOR HEAD
0811-102	DOOR JAMB
0833-007	ROLLUP DOOR HEAD (INSULATED)
0833-008	ROLLUP DOOR JAMB AND SILL (INSULATED)
0871-001	DOOR SILL
0890-002	LOUVER HEAD AND SILL
0890-003	LOUVER HEAD AND SILL
1000 Series	
1014-001	DANGER SIGN
1014-002	CAUTION SIGN
1014-003	WARNING SIGN
1014-006	HAZARDOUS MATERIAL SIGNAL
1014-008	NOTICE SIGN
1014-101	REFLECTOR MARKER SIGN
1300 Series	
1334-001	LOW EAVE AND GUTTER
1334-002	HIGH EAVE
1334-003	RAKE TRIM
1334-004	WALL BASE
1334-005	WALL BASE
1334-009	OUTSIDE CORNER
1334-010	WALL PENETRATION

SALMON CREEK PHASE 5B STANDARD DETAIL INDEX

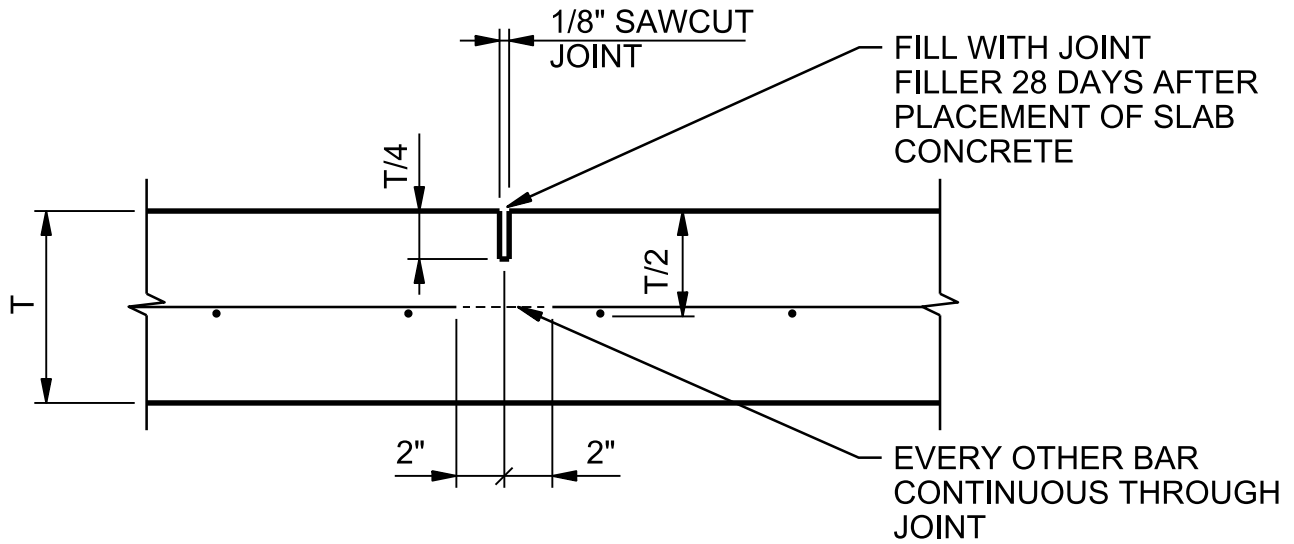
DETAIL #	DETAIL DESCRIPTION
2200 Series	
2210-720	HOSE RACKS (1 OF 2)
	HOSE RACKS (2 OF 2)
2240-100	HUB DRAIN
2240-101	EXTERIOR CLEANOUT
2600 Series	
2605-002	DEVICE MOUNTING, WALL OR COLUMN
2605-004	DEVICE MOUNTING, AT RAILING
2605-005a	DEVICE MOUNTING, CONTROL STATION PEDESTAL
2605-007	DEVICE MOUNTING, RAILING MOUNTED EQUIPMENT SUPPORT (1 OF 2)
	DEVICE MOUNTING, RAILING MOUNTED EQUIPMENT SUPPORT (2 OF 2)
2605-008a	DEVICE MOUNTING, PULLBOX PEDESTAL
2605-008b	DISCONNECT, DEVICE MOUNTING, CONTROL STATION PEDESTAL
2605-009a	DEVICE MOUNTING, FROM FLOOR
2605-011a	DEVICE MOUNTING, PEDESTAL
2605-012	DEVICE MOUNTING, PEDESTAL
2605-017	CONDUIT SUPPORT ON STRUCTURE
2605-100b	TERMINATION OF SHIELDED INSTRUMENTATION CABLE
2605-101	MSC CABLE TERMINATION
2605-203	CONDUIT GROUNDING
2605-206	GROUND ELECTRODE
2605-207	GROUNDING, GENERAL STAIRWAY
2605-208	GROUND BUS
2605-235	GROUND ROD CONNECTION
2605-300	CONDUIT RACKING SYSTEM
2605-303	CONDUIT TO EQUIPMENT FROM CEILING
2605-304	CONDUIT ENTRANCE
2605-305	CONDUIT TRANSITION AND SUPPORT
2605-306	INTERIOR WALL PENETRATION
2605-310	INTERIOR FLOOR SLAB PENETRATION
2605-315	EXPANSION/DEFLECTION COUPLING
2605-318	VERTICAL CONDUIT SUPPORT
2605-320	WATERTIGHT WALL CONDUIT SEAL
2605-400b	DUCT BANK (1 OF 2)
2605-400c	DUCT BANK (2 OF 2)
2605-423	TRENCH AND CONDUIT PLACEMENT
2605-444	HANDHOLE

SALMON CREEK PHASE 5B STANDARD DETAIL INDEX

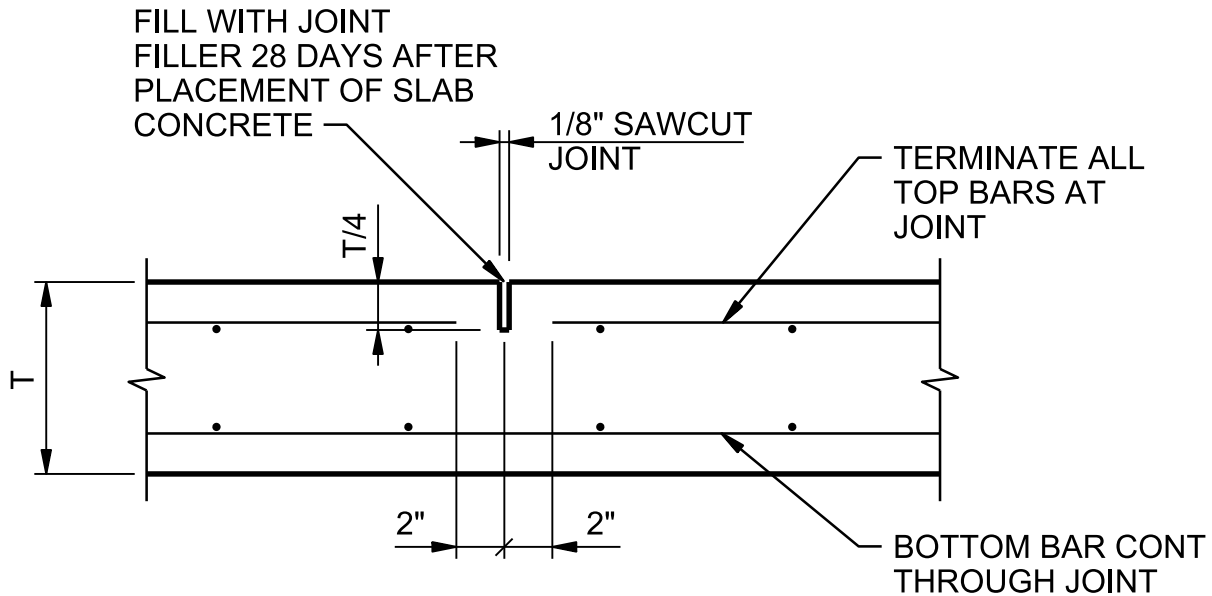
DETAIL #	DETAIL DESCRIPTION
2605-445	CONDUIT HANDHOLE/MANHOLE ENTRANCE
2605-448	CABLE RACK
2605-501	OSHA/NEC PLACARD
2642-805	CATHODIC PROTECTION POST MOUNTED TEST STATION WITH INSULATING JOINT
2642-825	CATHODIC PROTECTION FLUSH MOUNTED TEST STATION WITH INSULATING JOINT
2642-840	PUSH-ON JOINT BOND
2642-842	FLANGED JOINT BOND
2642-869	GALVANIC ANODE INSTALLATION
2642-910	CATHODIC PROTECTION WIRE CONNECTION FOR STEEL AND DUCTILE IRON PIPE
2642-930	INSULATED FLANGES
2650-102	EXTERIOR BUILDING LIGHT CONTROL
2656-216	PRECAST SITE LIGHT POLE FOOTING
3100 Series	
3123-110	TYPICAL TRENCH
3123-115	SURFACE RESTORATION
3123-120	TRENCH PIPE CROSSING
3200 Series	
3212-210	ASPHALT CONCRETE PAVEMENT
3212-215	PAVEMENT CONNECTION
3213-220	TYPICAL CONCRETE SIDEWALK
3213-240	CONCRETE PAVEMENT
3215-260	GRAVEL SURFACING
3216-315	CONCRETE CURB
3231-410	CHAIN LINK FENCE
3231-416	ARCHITECTURAL SWING GATE
3231-420	PEDESTRIAN GATE
3305-954	BOLLARD
4000 Series	
4005-502	PIPE FLANGE SUPPORT
4005-522	PIPE SUPPORT HANGER - SMALL DIAMETER
4005-526	FRP DUCT SUPPORT DETAIL
4005-527	FRP DUCT SUPPORT DETAIL
4005-528	DUCT SUPPORT SADDLE
4005-529	DUCT SUPPORT AT WALL
4005-530	DUCT SUPPORT AT WALL
4005-531	DUCT SUPPORT AT WALL
4005-532	DUCT SUPPORT AT MASONRY WALL

SALMON CREEK PHASE 5B STANDARD DETAIL INDEX

DETAIL #	DETAIL DESCRIPTION
4005-533	DUCT SUPPORT AT MASONRY WALL
4005-534	DUCT SUPPORT
4005-535	DUCT SUPPORT
4005-540	DUCT SUPPORT DETAIL
4005-541	TRAPEZE PIPE HANGER
4005-542	ROOF HANGER - LONGITUDINAL BRACE
4005-550	OVERHEAD PIPE HANGER
4005-551	PIPE LONGITUDINAL BRACE
4005-552	PIPE SUPPORT BRACE TO WALL
4005-711	TYPE B PIPE SWAY BRACE
4027-154	NON-FREEZE POST HYDRANT
4027-182	TYPE 2 FLUSHING CONNECTION
4027-191	LINE DRAIN VALVE INSTALLATION
4027-194	PRESSURE TEST POINT
4027-205	PIPE HIGH POINT VENT
4027-600	DUCTILE IRON WALL PIPE
4027-601	MECHANICAL JOINT WALL PIPE FOR DIP
4027-604	TYPE B WALL SLEEVE
4027-605	STEEL WALL PIPE
4027-607	WALL PIPE PENETRATION SEAL
4027-609	DUCTILE IRON WALL PIPES
4027-610	PIPE PENETRATION
4027-611	BURIED FRP DUCT PENETRATION
4027-640	BURIED GATE VALVE BOX
4091-219	FLOW ELEMENT AND TRANSMITTER - MAGNETIC
4091-302	PRESSURE INSTRUMENT INSTALLATION - DIRECT MOUNTING
4091-304	PRESSURE INSTRUMENT INSTALLATION - ANNULAR SEAL
4091-305	PRESSURE CONNECTION INSTALLATION
4091-306	PRESSURE TRANSMITTER INSTALLATION
4091-307	PRESSURE DIFFERENTIAL TRANSMITTER/INDICATOR INSTALLATION
4091-380	FIELD INSTRUMENT MOUNTING - STANCHION
4091-382	CASE MOUNTED INSTRUMENTS – STANCHION (1 OF 2)
	CASE MOUNTED INSTRUMENTS – STANCHION (2 OF 2)
4091-388	WALL MOUNTED PANEL OR INSTRUMENT INSTALLATION



SINGLE REINFORCEMENT MAT



DOUBLE REINFORCEMENT MAT

NOTES:

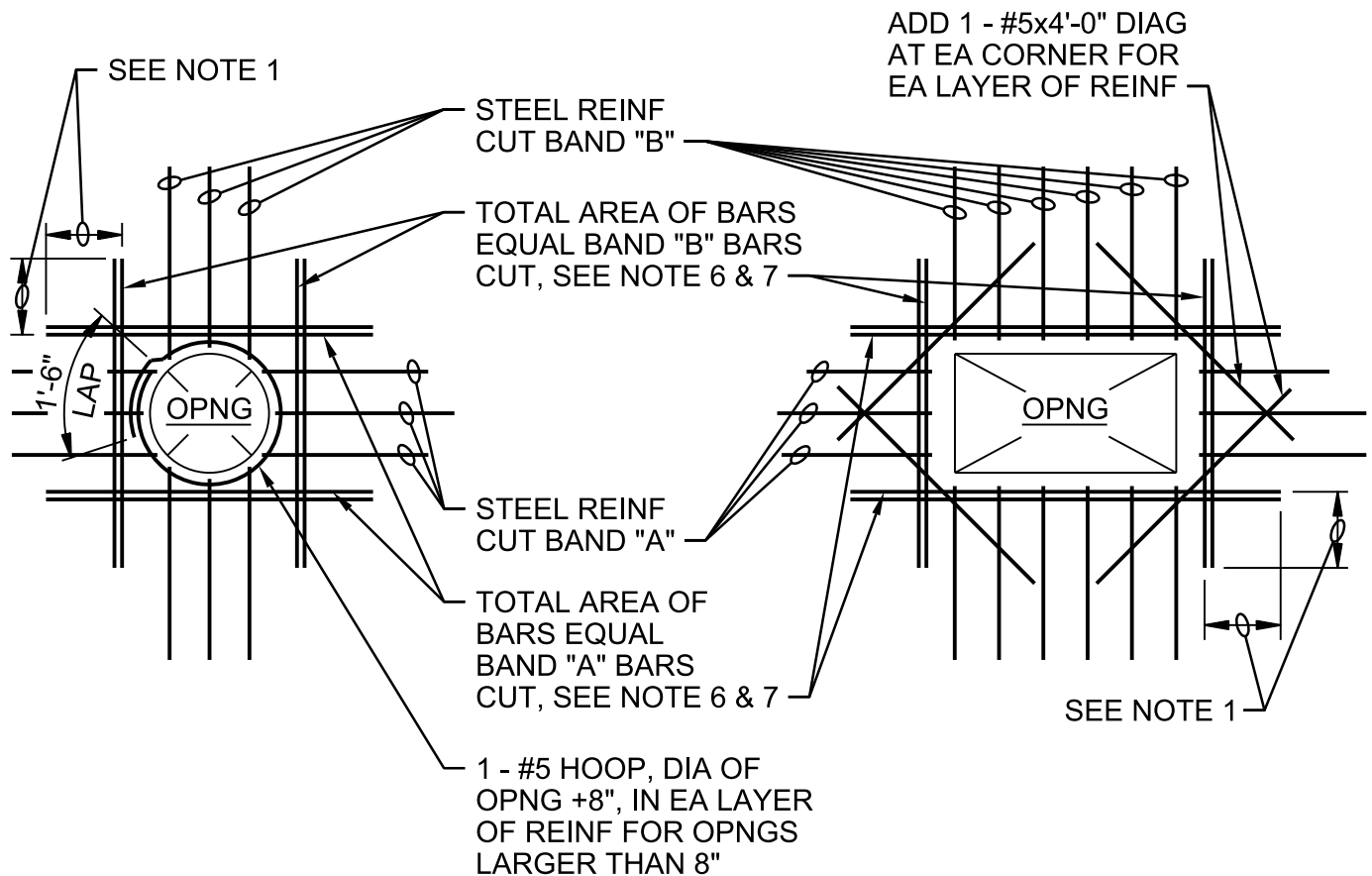
1. CONTRACTOR SHALL USE STRING LINE OR OTHER POSITIVE MEANS TO PLACE REINFORCEMENT AND LOCATE SAWCUT.

BUILDING SLAB ON GRADE SAWN CONTROL JOINT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0315-192



NOTES:

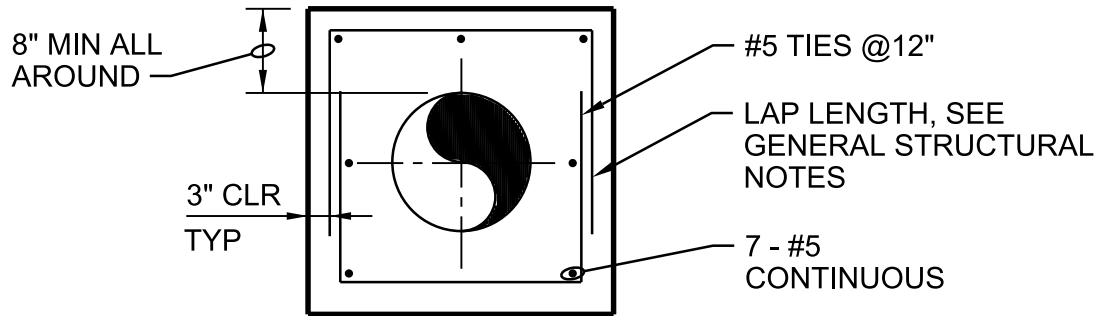
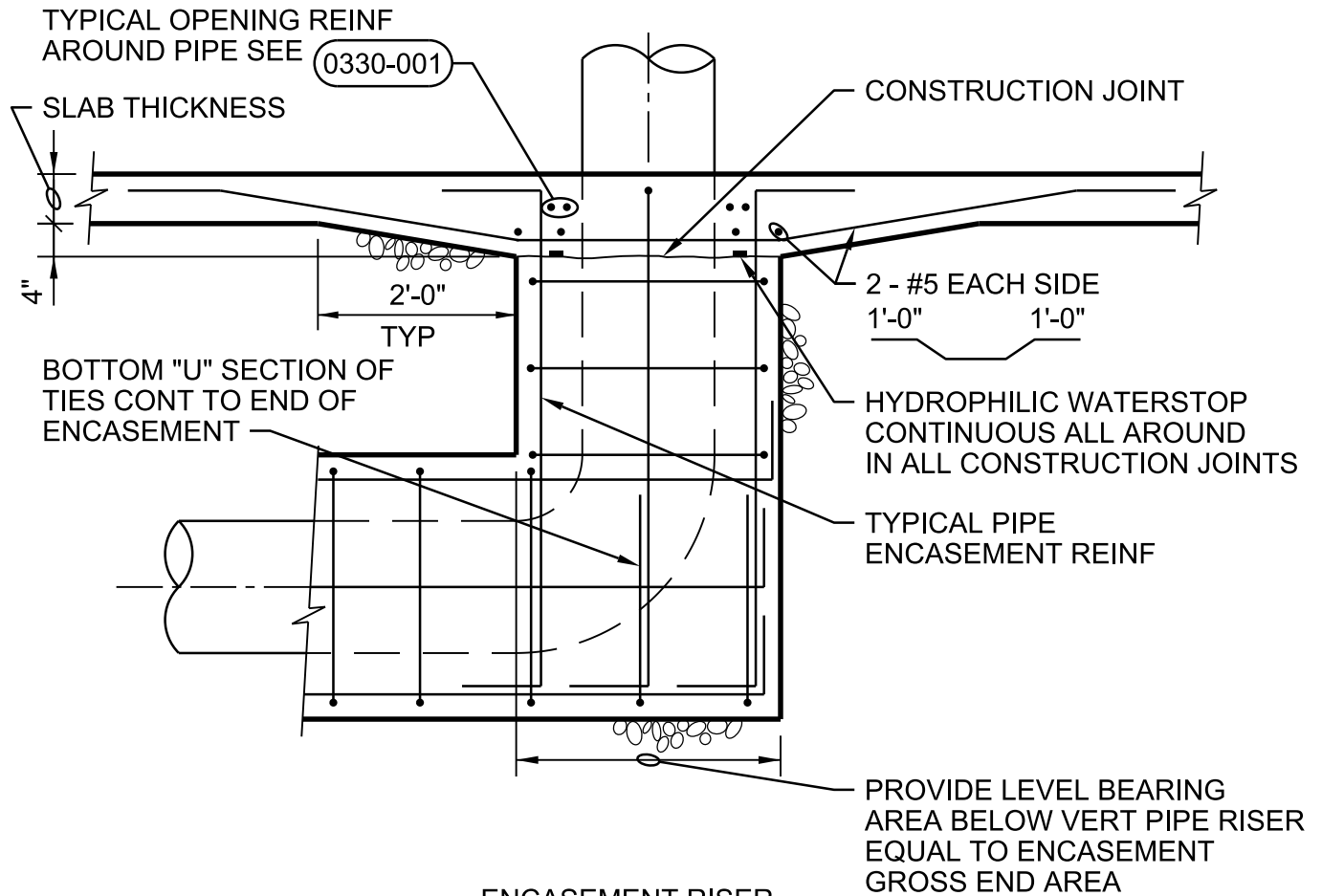
1. PROVIDE MINIMUM LAP, SEE GENERAL STRUCTURAL NOTES.
2. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS OF BELOW GRADE AND HYDRAULIC STRUCTURES AND ALL STRUCTURAL CONCRETE SLABS UNLESS INDICATED OTHERWISE ON PLANS.
3. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
4. PROVIDE A MINIMUM OF 2 "A" BARS AND 2 "B" BARS EACH SIDE OF OPENING (1 EACH FACE), INCLUDING DOWELS AND CORNER BARS, TYPICAL.
5. FOR OPENINGS LARGER THAN 8'-0", REINFORCE SAME AS FOR 8'-0" OPENINGS.
6. SPACE AT 3 BAR DIAMETERS (OR 3" MINIMUM) ON CENTER. LOCATE HALF OF TOTAL AREA ON EACH SIDE OF OPENING.
7. AT OPENINGS WITHIN 12" OF AN INTERSECTING WALL OR SLAB, PROVIDE ONLY THE EXTRA REINFORCEMENT WHICH WILL FIT, AT THE BAR SPACING IN NOTE 6.

OPENING REINFORCEMENT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-001



NOTES:

1. SECTION APPLIES TO PIPES W/ DIAMETERS 18" AND SMALLER. FOR 20" DIAMETER PIPES AND LARGER, SEE (0330-017).
2. WHEN PIPE ENCASEMENT IS CLOSER THAN 4" TO SLAB ABOVE, TIE SLAB & ENCASEMENT TOGETHER. SEE (0330-018).

PIPE ENCASEMENT

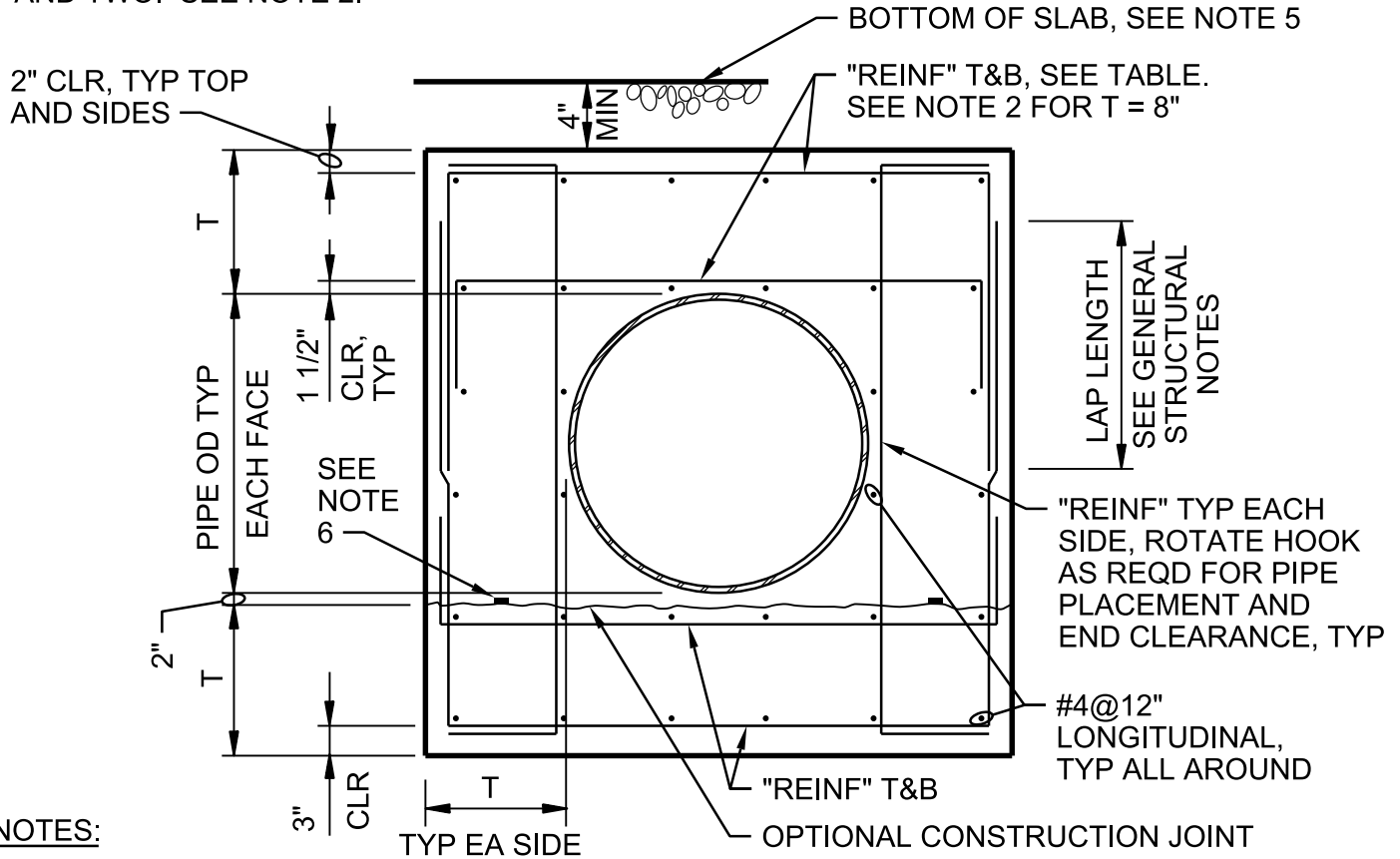
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-016

PIPE ENCASEMENT TABLE								
PIPE DIA (IN.)	H=10 FEET		H=20 FEET		H=30 FEET		H=40 FEET	
	T (in)	REINF	T (in)	REINF	T (in)	REINF	T (in)	REINF
20 THRU 30	8	#5@12"	10	#5@12"	10	#5@12"	10	#6@12"
36 THRU 42	10	#5@12"	10	#6@12"	10	#7@12"	10	#6@6"
48 THRU 54	10	#6@12"	10	#7@12"	10	#7@6"	12	#7@6"
UP TO 60	10	#6@12"	10	#6@6"	14	#7@6"	14	#7@6"

HEAVY DARK LINE INDICATES BREAK BETWEEN ONE LAYER OF REINFORCEMENT AND TWO. SEE NOTE 2.



NOTES:

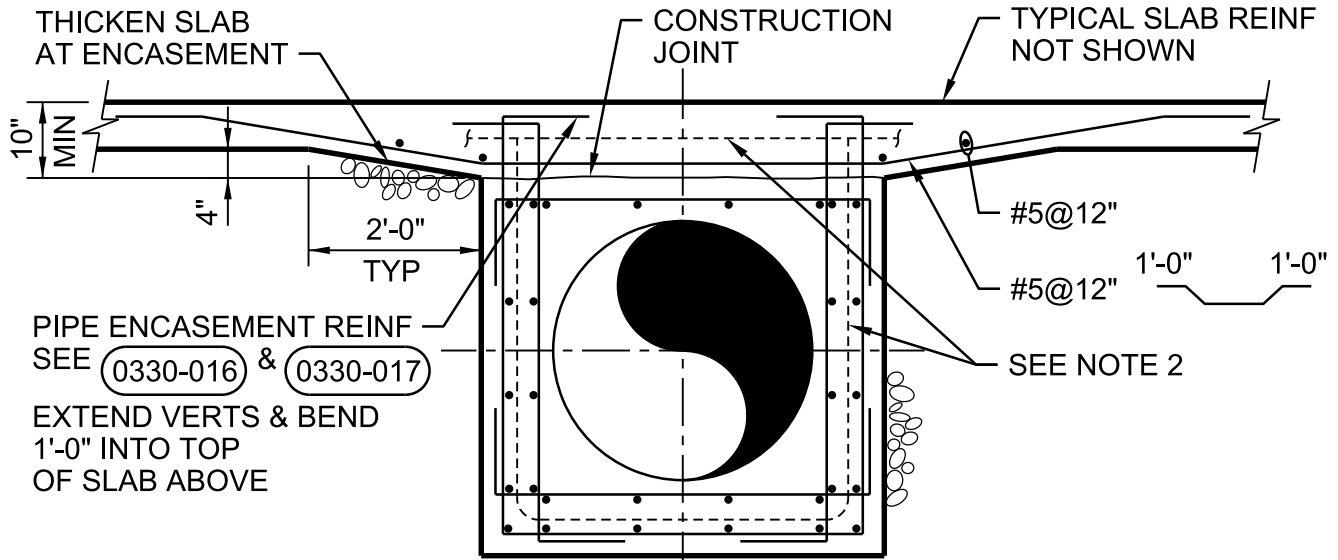
1. THIS DETAIL APPLIES TO PIPE DIAMETER OF 20" AND LARGER. FOR SMALLER THAN 20", SEE DETAIL (0330-016).
2. FOR T=8" REINFORCEMENT SHALL BE ONE LAYER AND CENTERED IN SLABS OR WALLS. SIM (0330-016).
3. FOR ENCASEMENT AT PIPE RISER, SEE (0330-016).
4. "H" IS FILL HEIGHT OR WATER DEPTH OR COMBINATION ABOVE PIPE.
5. WHEN PIPE ENCASEMENT CLOSER THAN 4" TO SLAB ABOVE, TIE SLAB & ENCASEMENT TOGETHER. SEE (0330-018).
6. HYDROPHILIC WATERSTOP CONTINUOUS ALL AROUND IN ALL CONSTRUCTION JOINTS.

PIPE ENCASEMENT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0330-017



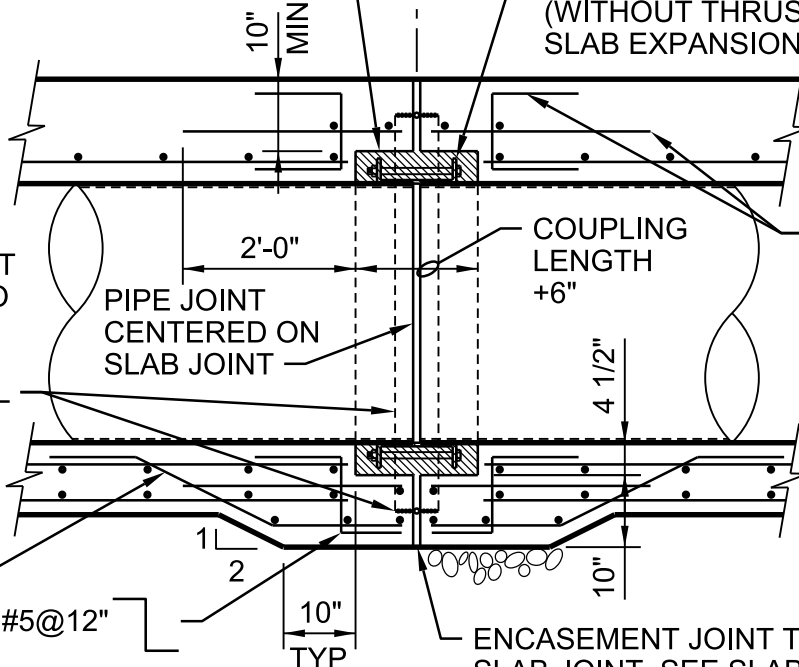
CLOSED CELLULAR SPONGE RUBBER ALL AROUND COUPLING TO ALLOW JOINT MOVEMENT (1" MIN)

SECTION

CL SLAB EXP, CONTRACTION OR CONTROL JOINT, SEE PLANS FOR LOCATION & JOINT TYPE

LOCATE PIPE FLEX COUPLING (WITHOUT THRUST TIES) AT ALL SLAB EXPANSION & CONTROL JOINTS

6" PLASTIC WATERSTOP IN ENCASEMENT JOINT. WELD TO WATERSTOP IN SLAB JOINT FOR CONT SEAL



#5@12" TYPICAL ENCASEMENT REINF DISCONTINUOUS AT JOINT

#5@12", TYP

#5@12"

JOINT DETAIL

NOTES:

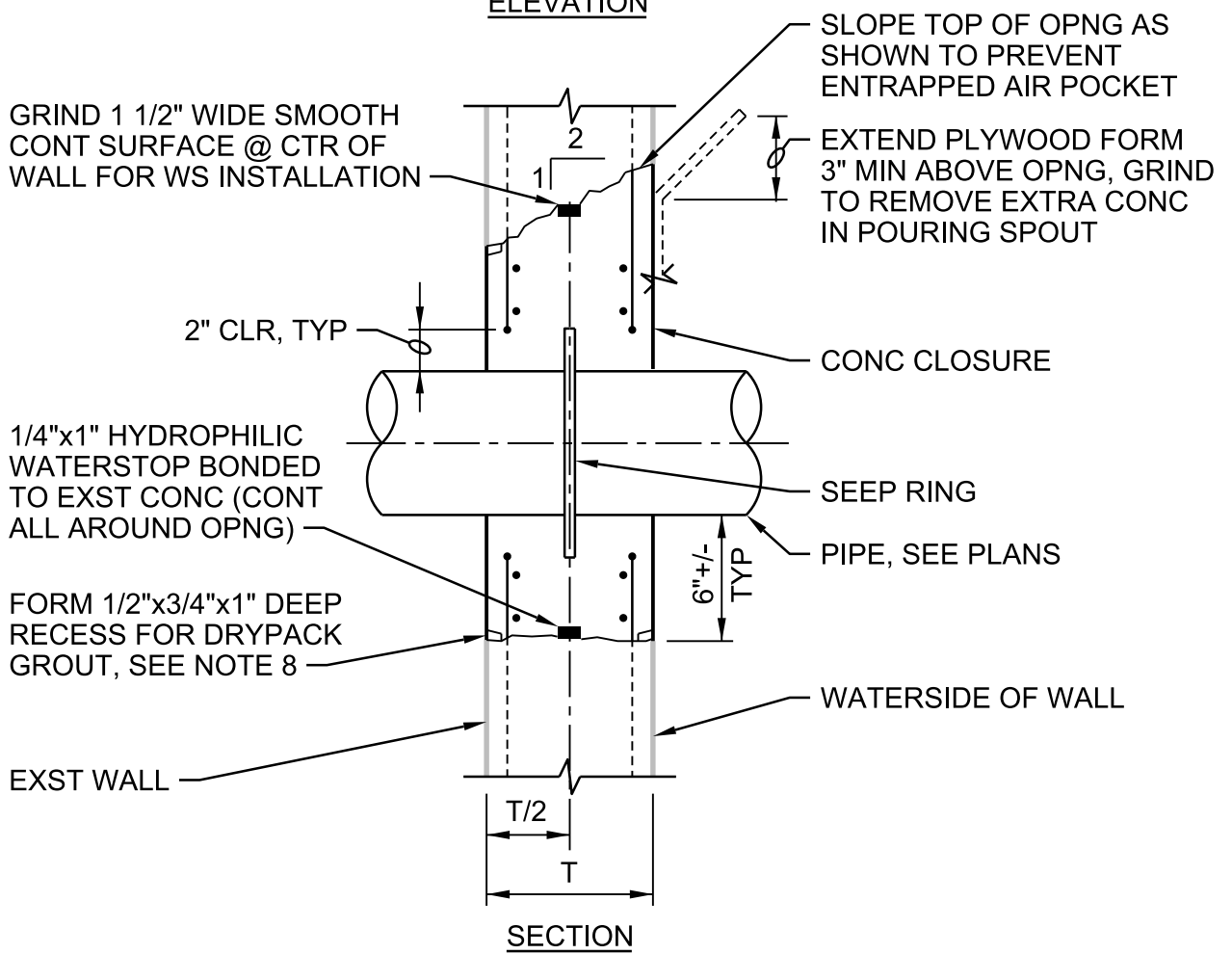
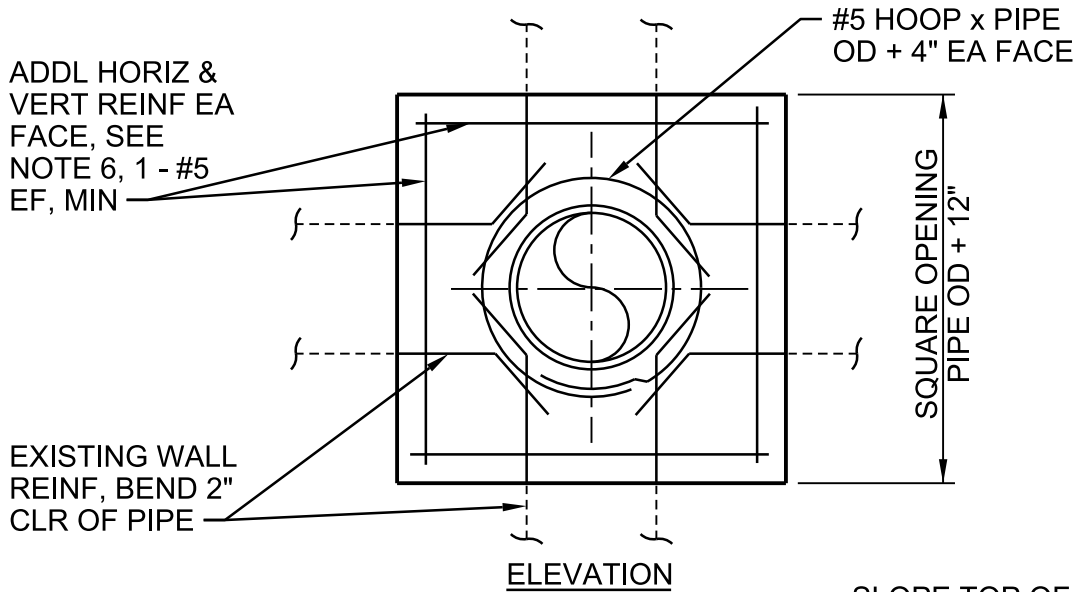
1. TIE PIPE ENCASEMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASEMENT AND BOTTOM OF SLAB IS LESS THAN 4".
2. 6" PLASTIC WS IN ENCASEMENT JOINTS. WELD TO WS IN SLAB JOINTS.

PIPE ENCASEMENT AT SLAB

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0330-018



TYPE 'A' - WITHOUT CLOSURE COLLAR

PIPE PENETRATION - EXISTING WALL

NTS

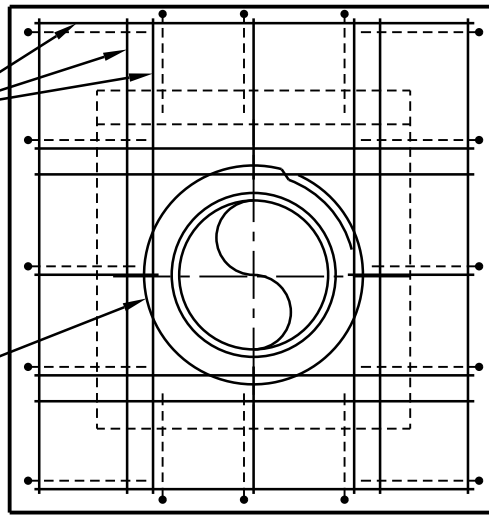
DETAIL 1 OF 3

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-022

#5@12" EW
W/ 2 - #5@3"
T&B & EA
SIDE OF PIPE

#5 HOOP x
PIPE OD + 4"



ELEVATION

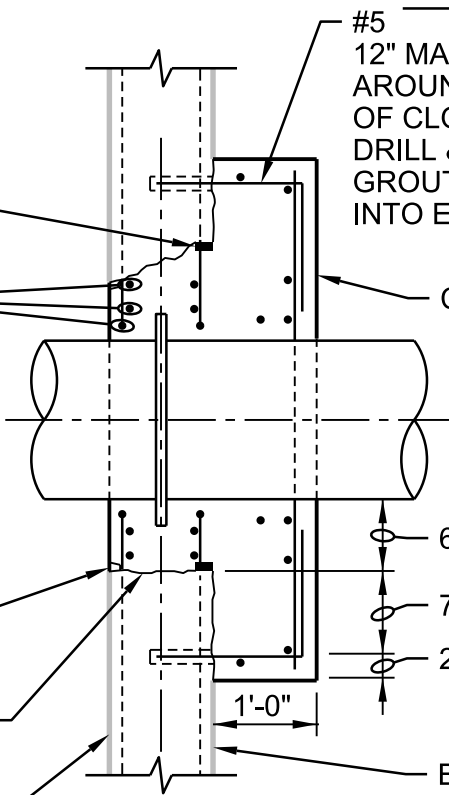
1/4"x1" HYDROPHILIC
WATERSTOP BONDED
TO SMOOTH SAWCUT
SURFACE OF EXST
WALL CONT ALL
AROUND

EXST WALL
REINFORCING,
SEE PIPE
PENETRATION
W/O CLOSURE
COLLAR

FORM 1/2"x3/4"x1"
DEEP RECESS FOR
DRYPACK GROUT
ALL AROUND

ROUGHEN SURFACE

WATERSIDE OF WALL



#5 12" DOWELS @
12" MAX SPG ALL
AROUND PERIMETER
OF CLOSURE COLLAR,
DRILL & EPOXY
GROUT 5 1/2" MIN
INTO EXST WALL

CONC CLOSURE COLLAR

6" +/-, TYP

7", TYP

2", TYP

BACKFILLED SIDE OF WALL

SECTION

TYPE 'B' - WITH CLOSURE COLLAR

PIPE PENETRATION - EXISTING WALL

NTS

DETAIL 2 OF 3

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-022

NOTES:

1. SAW-CUT 1-INCH DEEP x PIPE OD + 12" SQUARE SCORE LINE ON EACH FACE OF WALL. (VERIFY DEPTH OF CUT TO CLEAR REINFORCING.) (INCREASE HEIGHT AS NOTED AT TOP ON WATERSIDE FACE FOR POURING.)
2. CHIP TO REMOVE THE CONCRETE WITHIN THE SCORE LINE, WHILE PRESERVING THE EXISTING WALL REINFORCING.
3. CUT EXISTING REINFORCING AT CENTER OF OPENING AND BEND TO CLEAR PIPE.
4. GRIND 1 1/2" WIDE x CONT SMOOTH SURFACE ALL AROUND THE OPENING AT CENTER OF WALL. CLEAN SURFACES AND BOND CONTINUOUS HYDROPHILIC WATERSTOP IN PLACE.
5. INSTALL WALL PIPE. (COAT CONCRETE ENCASED PORTION OF PIPE WITH SPECIFIED COATING SYSTEM.)
6. INSTALL ADDITIONAL REINFORCING EACH FACE, EACH SIDE, ABOVE AND BELOW PIPE. HORIZONTAL REINFORCING TO HAVE COMBINED AREA EQUAL TO AREA OF HORIZONTAL REINFORCING CUT. VERTICAL REINFORCING TO HAVE COMBINED AREA EQUAL TO AREA OF VERTICAL REINFORCING CUT.
7. SOAK CONCRETE SURFACES AND WITHIN 15-MINUTES CAST CONCRETE CLOSURE. (CONCRETE CLOSURE MUST BE CAST BEFORE HYDROPHILIC WATERSTOP EXPANDS). FORM GROOVE ON ALL SIDES OF OPENING EXCEPT AT TOP ON THE POUR SIDE.
8. CLEAN SURFACES OF FORMED GROOVE WITH POWER WIRE BRUSH OR SANDBLASTING AND DRY-PACK WITH NON-SHRINK GROUT AFTER NEW CONCRETE MIN 28-DAYS OLD.

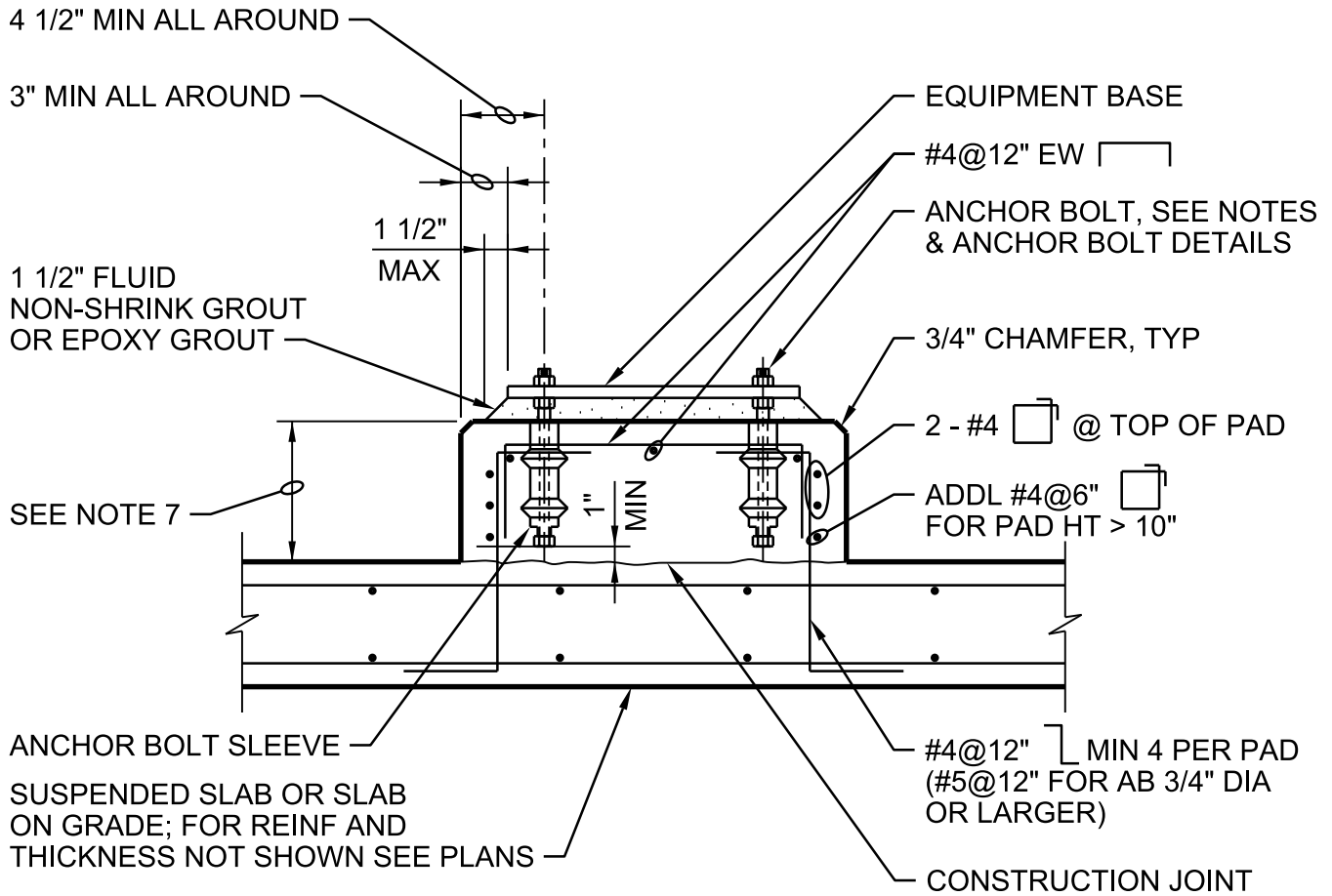
PIPE PENETRATION - EXISTING WALL

NTS

DETAIL 3 OF 3

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-022



TYPE 'A'

GENERAL NOTE:

FOR GENERAL NOTES SEE DETAIL 7 OF 7.

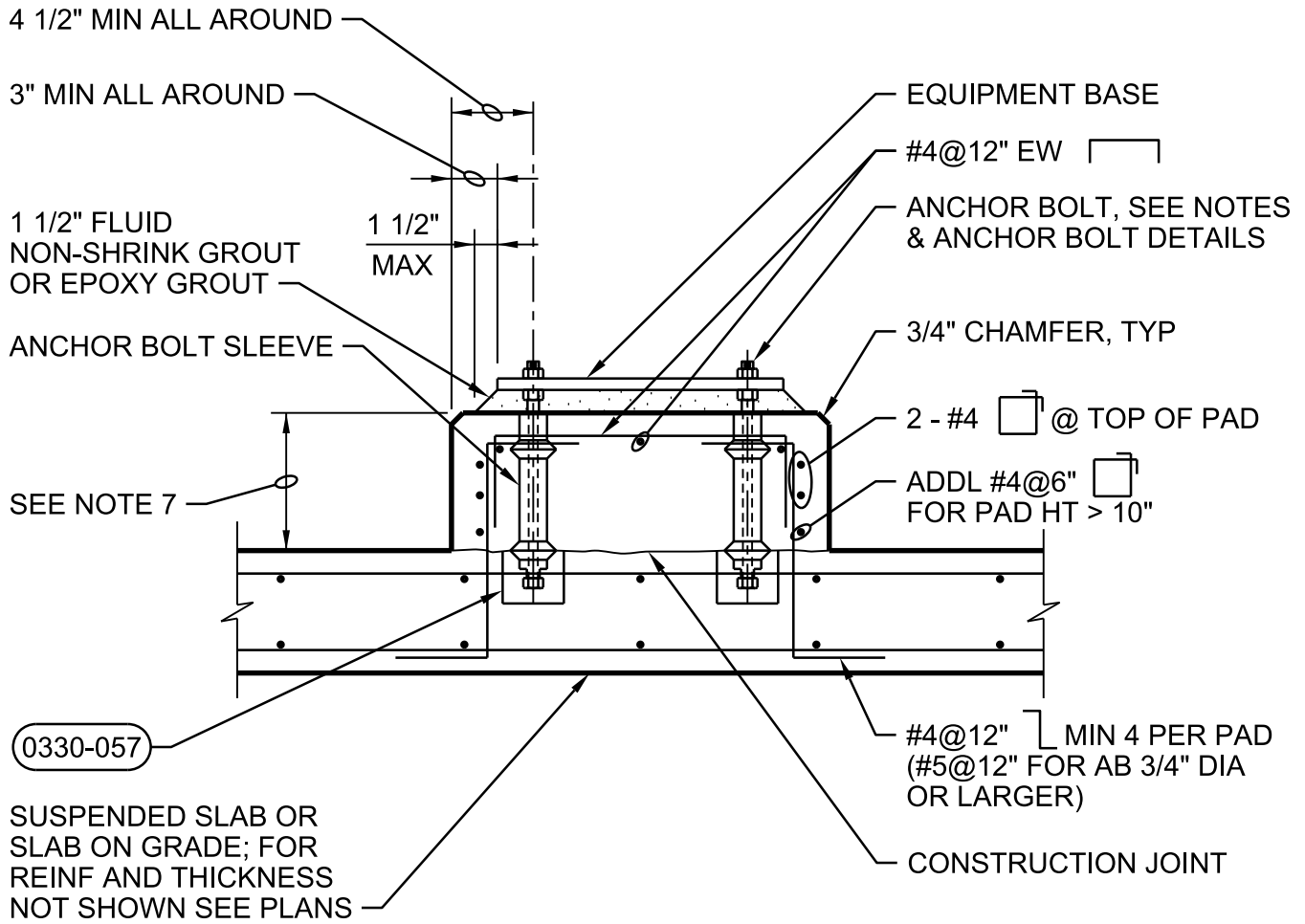
CONCRETE EQUIPMENT PAD - TYPE 'A'

NTS

DETAIL 1 OF 7

0330-056

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON



TYPE 'B'

GENERAL NOTE:

FOR GENERAL NOTES SEE DETAIL 7 OF 7.

CONCRETE EQUIPMENT PAD - TYPE 'B'

NTS

DETAIL 2 OF 7

0330-056

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2" MIN ALL AROUND
OR AS REQUIRED BY
ANCHORAGE
CALCULATIONS

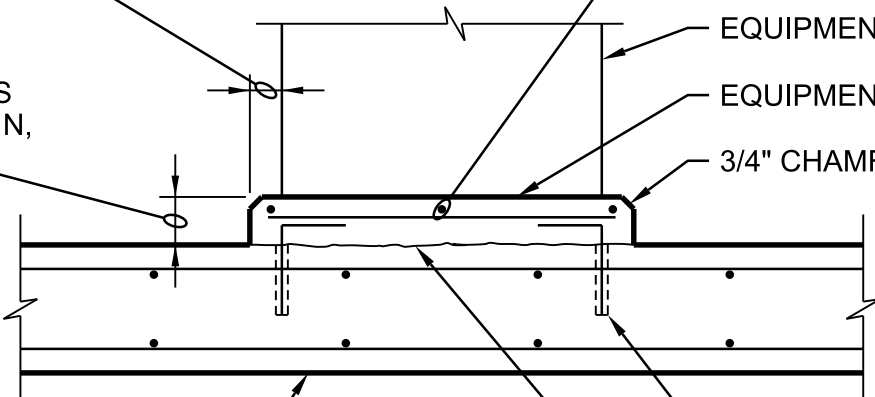
#3@12" EW, 1" CLR
FOR PAD HT < 4",
#4@12" EW, 1 1/2" CLR
FOR PAD HT > 4"

PAD HEIGHT AS
REQD, 3 1/2" MIN,
10" MAX

EQUIPMENT

EQUIPMENT PAD

3/4" CHAMFER, TYP



EXST OR NEW SUSPENDED
SLAB OR SLAB ON GRADE,
FOR THICKNESS SEE PLANS

#4 ADHESIVE DOWEL
@ 12" OC @ PERIMETER

0330-105

CONSTRUCTION JOINT,
ROUGHEN & CLEAN PRIOR
TO PLACING PAD

NOTES:

1. WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.
2. CONCRETE PADS FOR ELECTRICAL EQUIPMENT SHALL BE 3 1/2" HIGH, UNLESS NOTED OTHERWISE.

TYPE 'E'

GENERAL NOTE:

FOR GENERAL NOTES SEE DETAIL 7 OF 7.

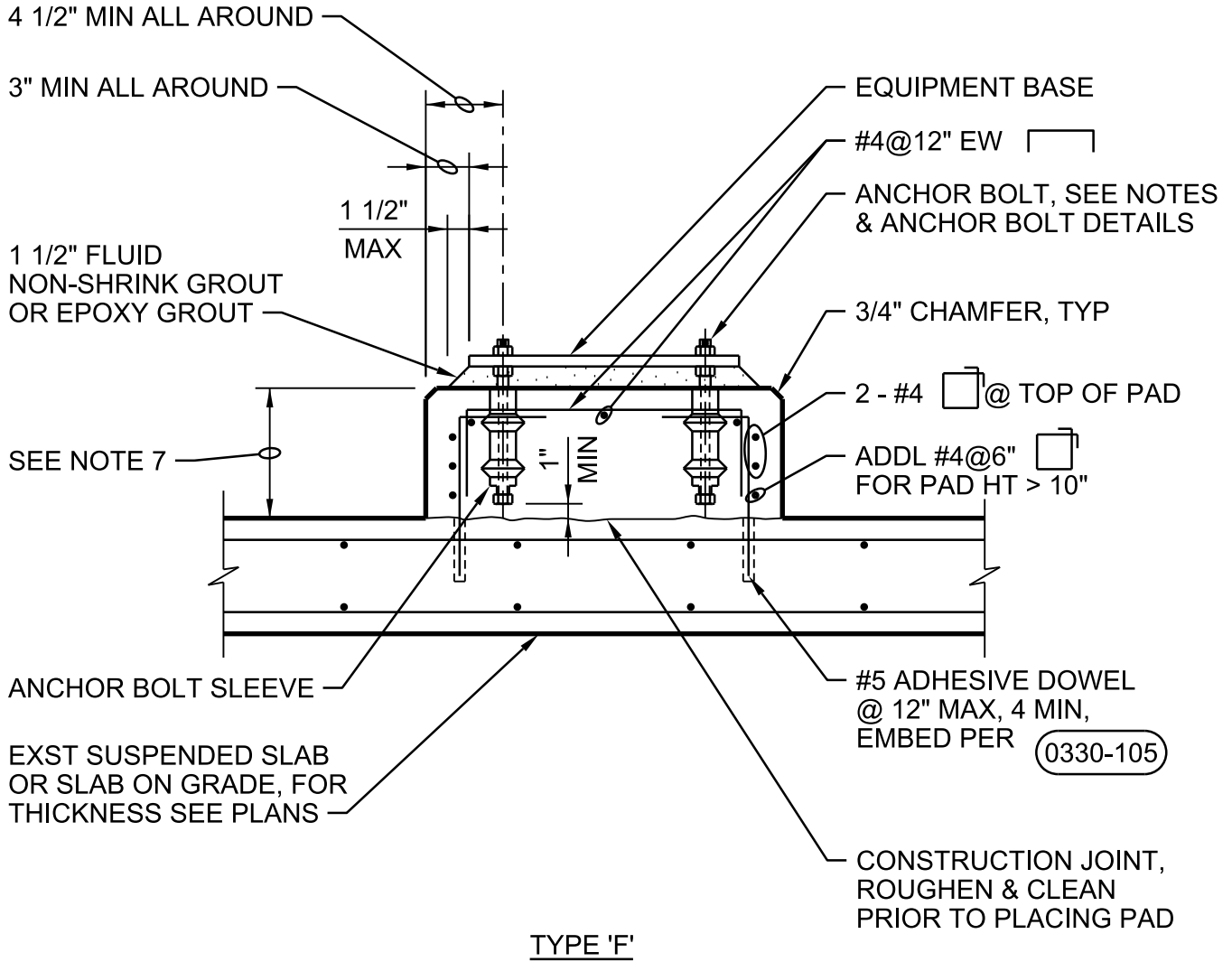
CONCRETE EQUIPMENT PAD - TYPE 'E'

NTS

DETAIL 3 OF 7

0330-056

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON



GENERAL NOTE:
 FOR GENERAL NOTES SEE DETAIL 7 OF 7.

CONCRETE EQUIPMENT PAD - TYPE 'F'

NTS

DETAIL 4 OF 7

0330-056

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

6" MIN, TYP UNLESS NOTED OTHERWISE ON PLANS

3/4" CHAMFER, TYP

THICKENED EDGE OF SLAB ALL AROUND

#5@12" EW AT 2" CLR FROM TOP SURFACE

EQUIPMENT

CONCRETE ANCHORS, SEE NOTE

FINISH GRADE

4"

6" MIN

#5 CONT

6" MIN

6" MIN

1

1.5

NOTE:

WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.

TYPE 'G'

GENERAL NOTE:

FOR GENERAL NOTES SEE DETAIL 7 OF 7.

CONCRETE EQUIPMENT PAD - TYPE 'G'

NTS

DETAIL 5 OF 7

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-056

6" MIN, TYP UNLESS NOTED OTHERWISE ON PLANS

3/4" CHAMFER, TYP

THICKENED EDGE OF SLAB ALL AROUND

#5@12" EW T&B

EQUIPMENT

CONCRETE ANCHORS, SEE NOTE

FINISH GRADE

4"

1'-0" MIN

1
1.5

6" MIN

2 - #5 CONT

10" MIN

NOTE:

WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.

TYPE 'H'

GENERAL NOTE:

FOR GENERAL NOTES SEE DETAIL 7 OF 7.

CONCRETE EQUIPMENT PAD - TYPE 'H'

NTS

DETAIL 6 OF 7

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-056

NOTES:

1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER AND AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE OR OTHER ACCEPTABLE MEANS, MATCHING THE BASE PLATE, WHILE PAD IS BEING PLACED.
3. ANCHOR BOLT SLEEVES SHALL BE USED TO PROVIDE MINIMUM ANCHOR BOLT MOVEMENT OF 1/2" IN ALL HORIZONTAL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER.
4. ANCHOR BOLT SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT AFTER BOLTS ARE ALIGNED. SEE (0330-057).
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS INDICATED OTHERWISE.
6. WEDGES, SHIMS, OR LEVELING NUTS SHALL BE USED TO SUPPORT THE BASE WHILE THE GROUT IS PLACED. WEDGES OR SHIMS SHALL BE REMOVED AFTER GROUT IS SET AND PACK VOID WITH GROUT.
7. HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT ABOVE SUPPORTING SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOWN, USE TYPE "B" EQUIPMENT PAD WITH BLOCKOUT.
8. TYPE "D" PAD SHALL BE USED ONLY WHERE SPECIFICALLY INDICATED. PLACE THE SURROUNDING FLOOR SLAB AFTER THE EQUIPMENT PAD.
9. AT CONTRACTOR'S OPTION, CONCRETE ANCHORS MAY BE USED IN LIEU OF CAST-IN-PLACE ANCHOR BOLTS FOR EQUIPMENT ANCHOR BOLTS LESS THAN 3/4" DIAMETER WHEN APPROVED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER. ANCHORS SHALL BE INSTALLED WITH 4" MINIMUM EDGE DISTANCE IN EACH DIRECTION.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

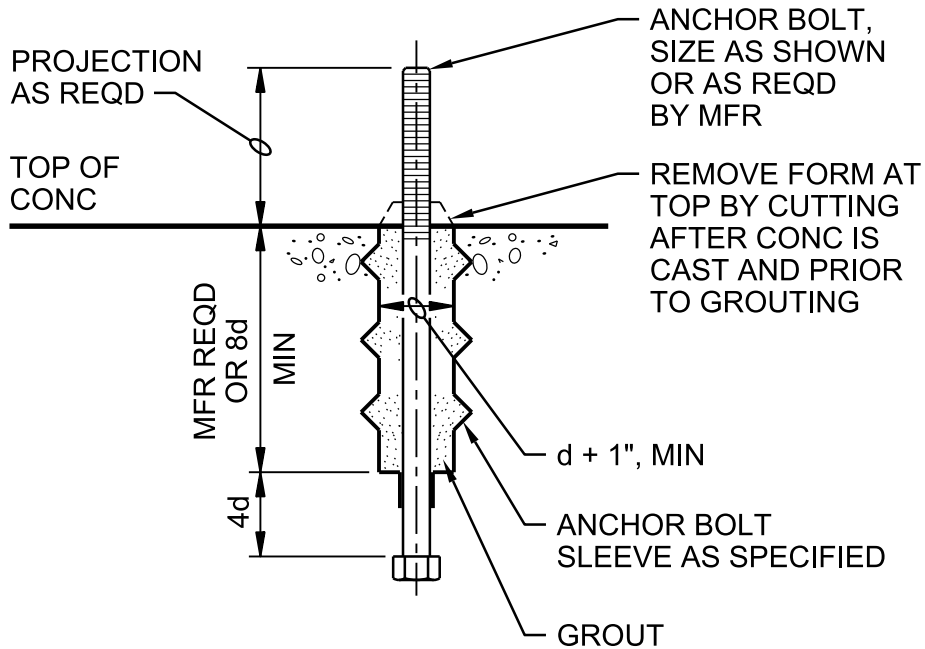
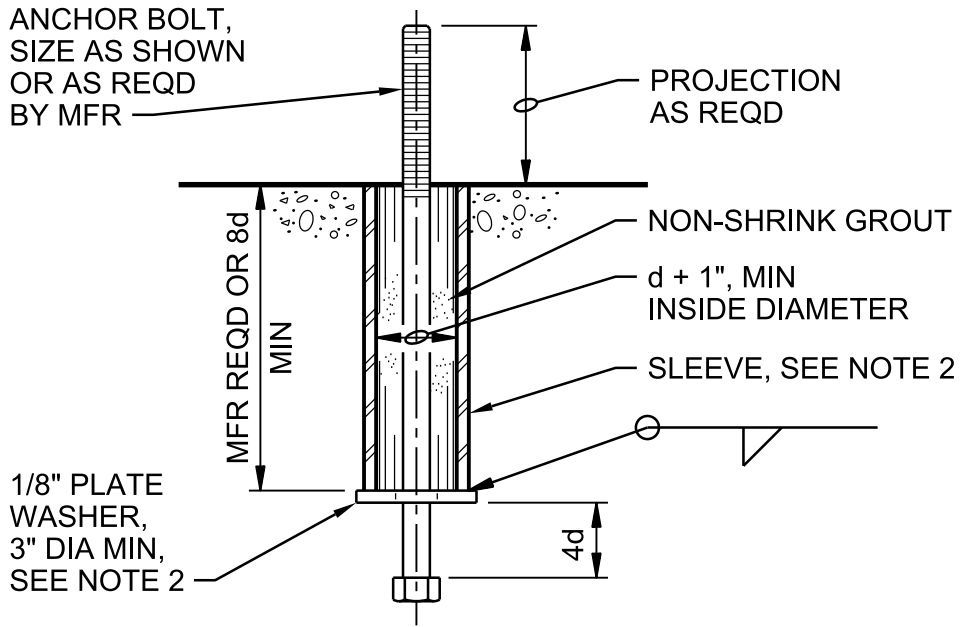
CONCRETE EQUIPMENT PAD - NOTES

NTS

DETAIL 7 OF 7

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

(0330-056)



MACHINERY ANCHOR BOLT DETAIL

NOTES:

1. FOR CONCRETE EQUIPMENT PAD DETAILS AND NOTES NOT SHOWN SEE (0330-056) .
2. MATERIAL TO MATCH BOLT.

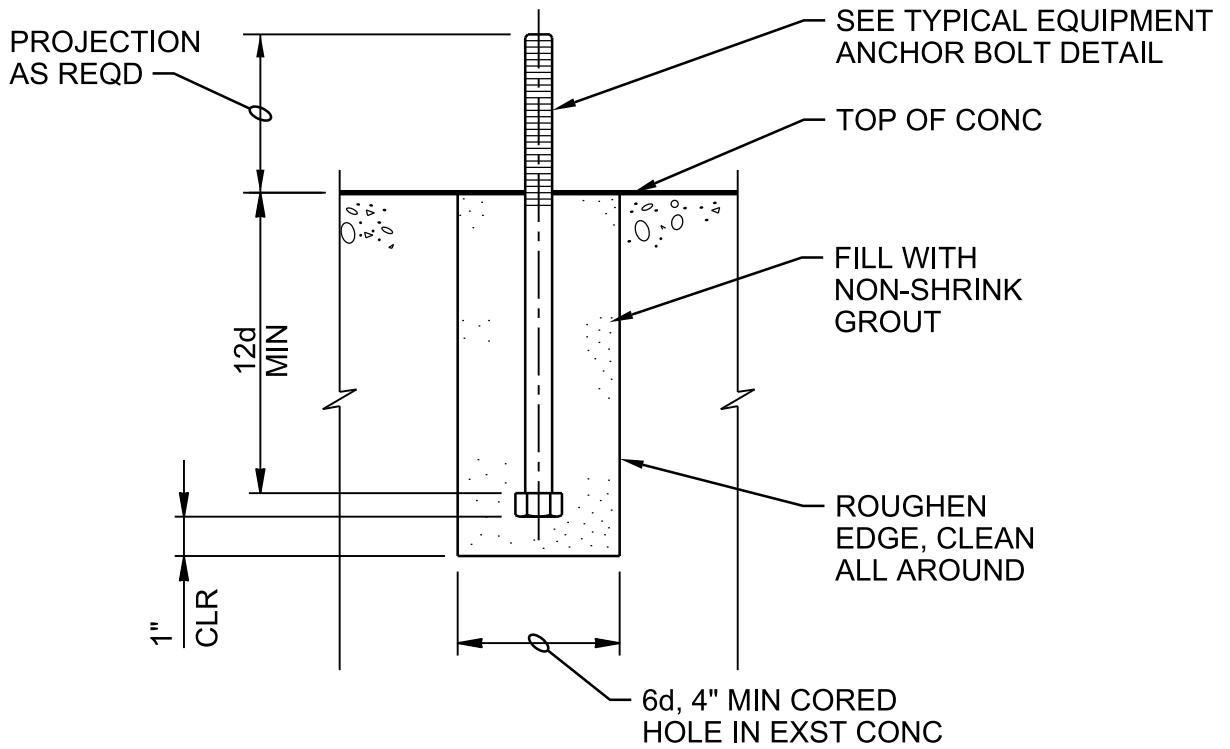
ANCHOR BOLT DETAILS

NTS

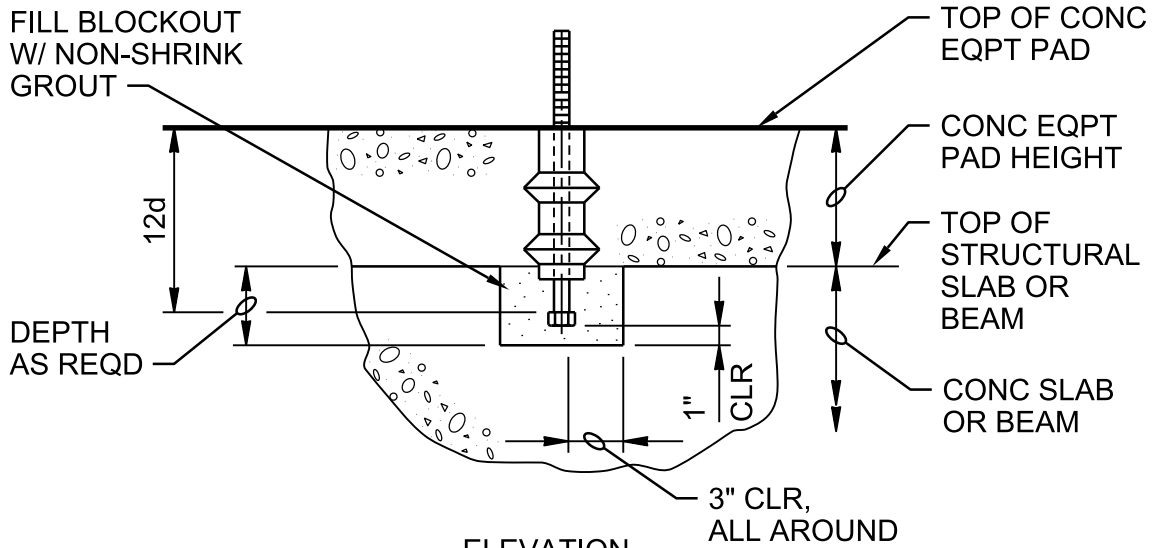
DETAIL 1 OF 2

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

(0330-057)



ANCHOR BOLT RETROFIT



ELEVATION

ANCHOR BOLT BLOCKOUT

NOTES:

1. FOR CONCRETE EQUIPMENT PAD DETAILS AND NOTES NOT SHOWN SEE (0330-056) .
2. MATERIAL TO MATCH BOLT.

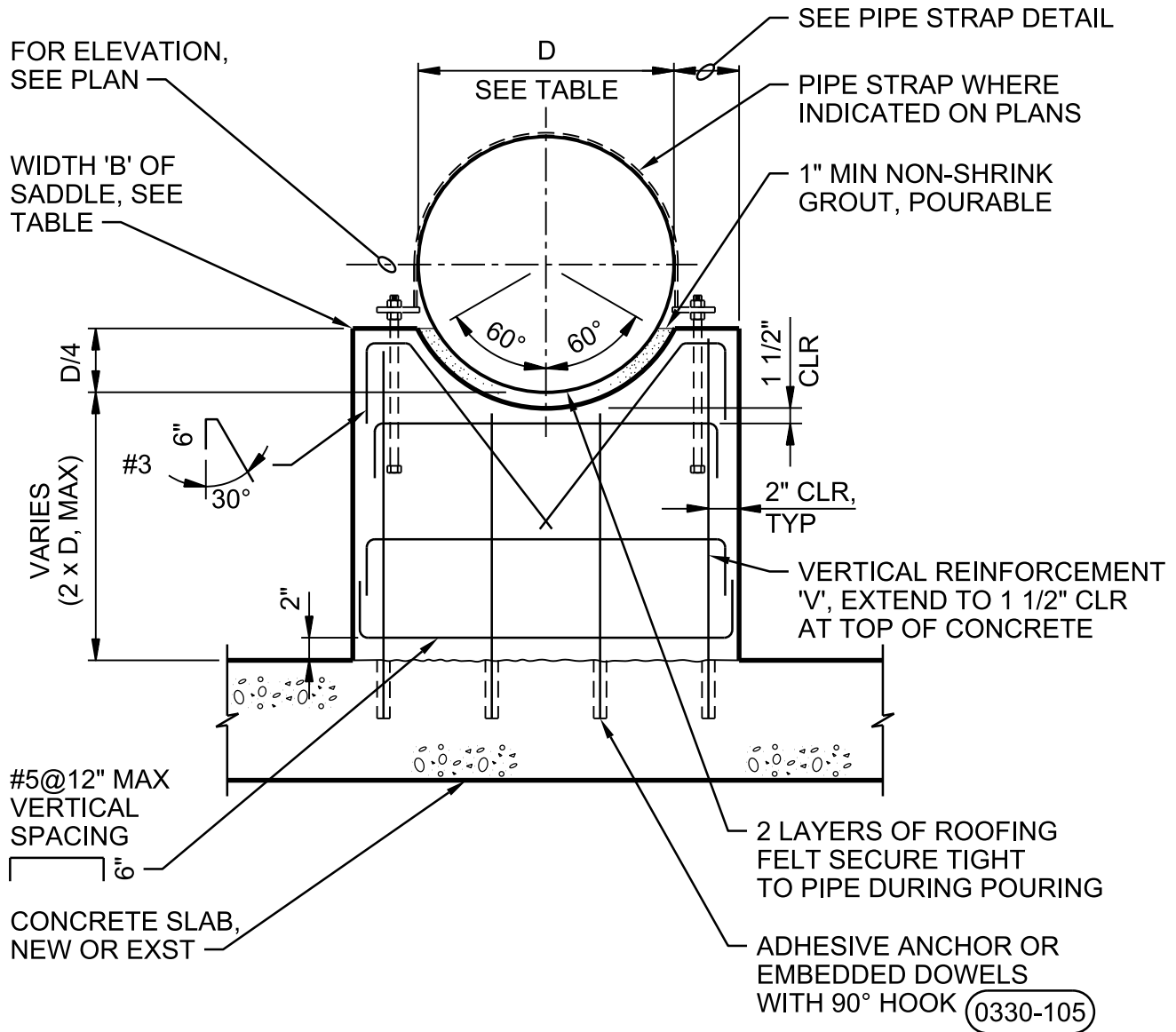
ANCHOR BOLT DETAILS

NTS

DETAIL 2 OF 2

(0330-057)

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON



TYPE 'A' SADDLE

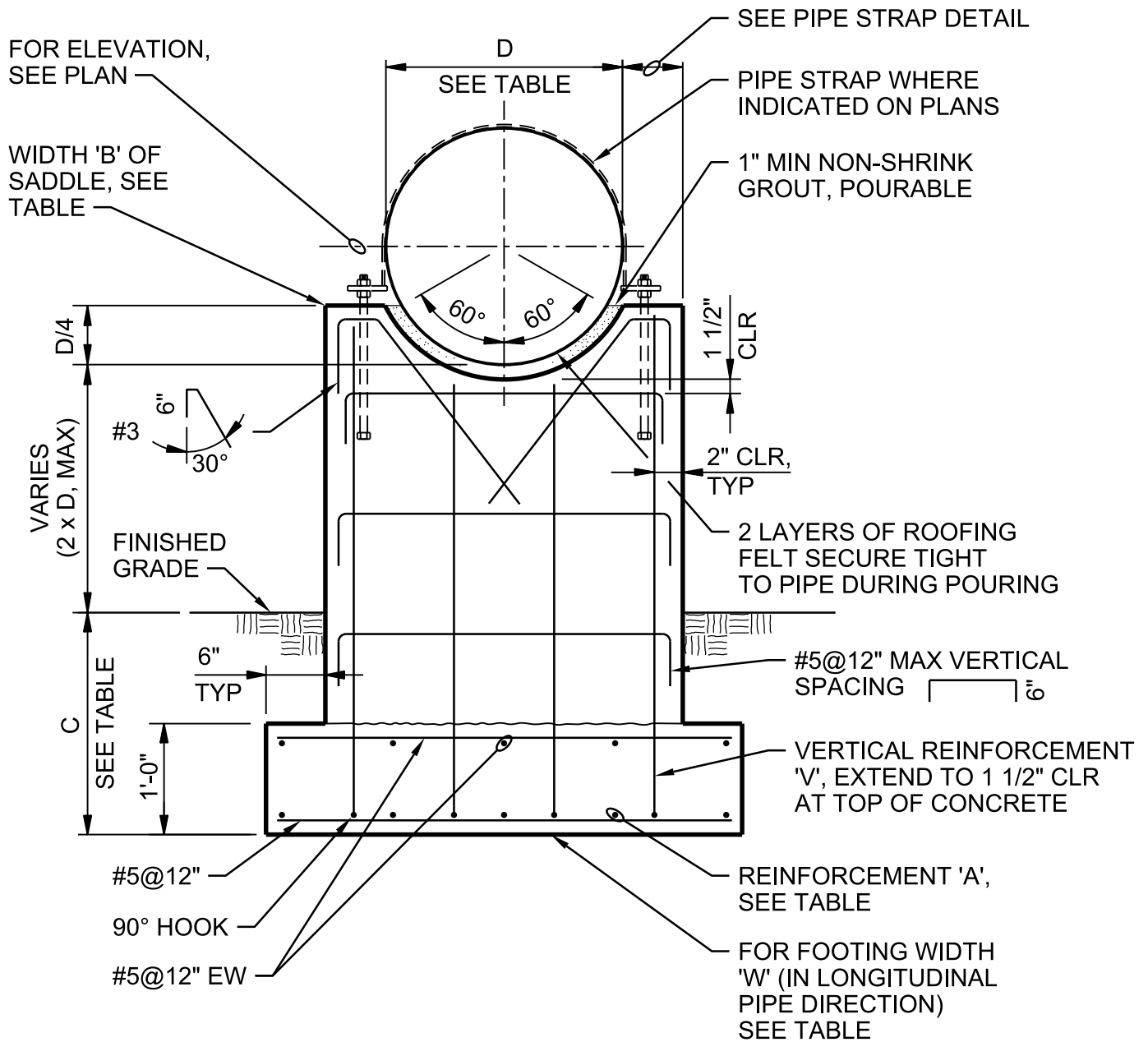
PIPE SUPPORT - CONCRETE SADDLE

NTS

DETAIL 1 OF 4

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-061



TYPE 'B' SADDLE

PIPE SUPPORT - CONCRETE SADDLE

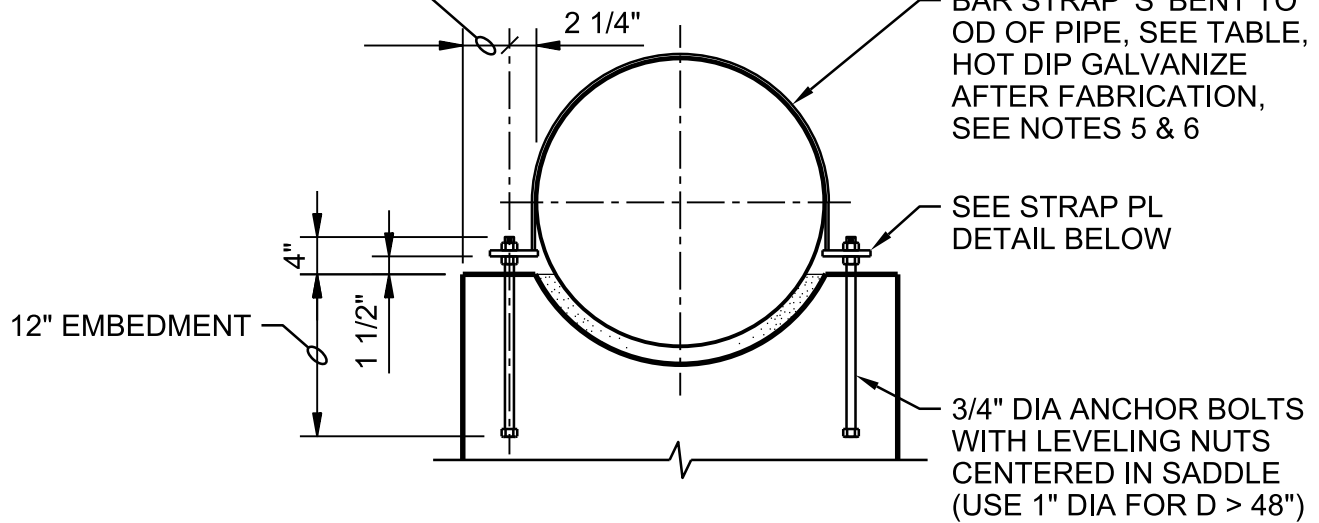
NTS

DETAIL 2 OF 4

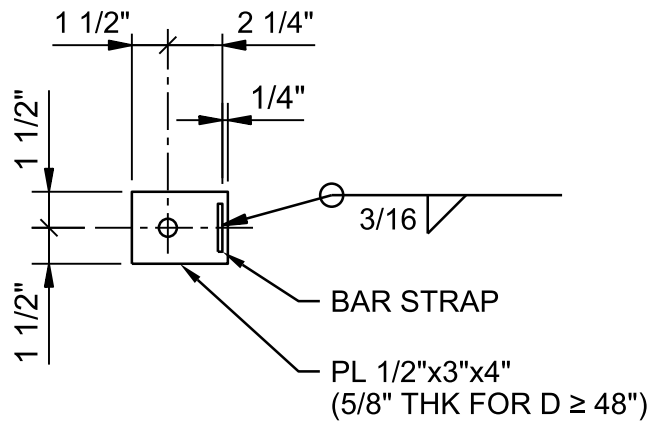
PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-061

4 1/2" FOR 3/4" ANCHOR BOLT,
6" FOR 1" ANCHOR BOLT



PIPE STRAP



PLAN

PIPE STRAP PLATE

PIPE SUPPORT - CONCRETE SADDLE

NTS

DETAIL 3 OF 4


PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-061

PIPE SADDLE TABLE					
PIPE DIAMETER D	SADDLE WIDTH B	LAYERS OF REINFORCEMENT	VERTICAL REINFORCEMENT V	PIPE STRAP SIZE S	NO. OF STRAPS
D ≤ 12"	9"	1 (CTRD)	#5@12"	3/16"x2"	1
12" < D ≤ 24"	9"	1 (CTRD)	#5@12"	3/16"x2 1/2"	1
24" < D ≤ 36"	10"	2 (EF)	#5@12"	1/4"x2"	1
36" < D ≤ 48"	12"	2 (EF)	#5@12"	1/4"x3"	1
48" < D ≤ 60"	16"	2 (EF)	#6@12"	3/8"x3"	2
60" < D ≤ 72"	18"	2 (EF)	#6@12"	3/8"x3"	2

TYPE 'B' PIPE SADDLE FOOTING TABLE			
PIPE DIAMETER D	FOOTING WIDTH W	REINFORCEMENT A	FOOTING DEPTH C
D ≤ 12"	1'-6"	#5@12"	2'-0"
12" < D ≤ 24"	2'-0"	#5@12"	2'-0"
24" < D ≤ 36"	3'-0"	#5@12"	2'-0"
36" < D ≤ 48"	4'-0"	#5@12"	2'-0"
48" < D ≤ 60"	6'-0"	#5@6"	2'-0"
60" < D ≤ 72"	8'-0"	#5@6"	2'-0"

NOTES:

- FOR 'B'=10" OR THICKER, USE 2 LAYERS OF REINFORCEMENT, TURN HORIZONTAL BARS 90° TO HOOK AROUND VERTICALS , 1 1/2" COVER.
- FORM 3/4" BEVEL ON ALL EXPOSED CORNERS OF SUPPORT.
- USE TYPE 'A' SADDLE IN ALL LOCATIONS WHERE A SLAB (NEW OR EXISTING) OCCURS. USE TYPE 'B' IN OTHER LOCATIONS.
- FOR LOCATIONS WHERE PIPE STRAP IS REQUIRED, REFER TO DRAWINGS. UNLESS INDICATED OTHERWISE A STRAP IS NOT REQUIRED.
- AT SUBMERGED CONDITIONS, STRAP SHALL BE STAINLESS STEEL.
- PROVIDE 3/4" x (STRAP WIDTH PLUS 1" WIDE) NEOPRENE PAD BETWEEN STRAP AND PIPE.

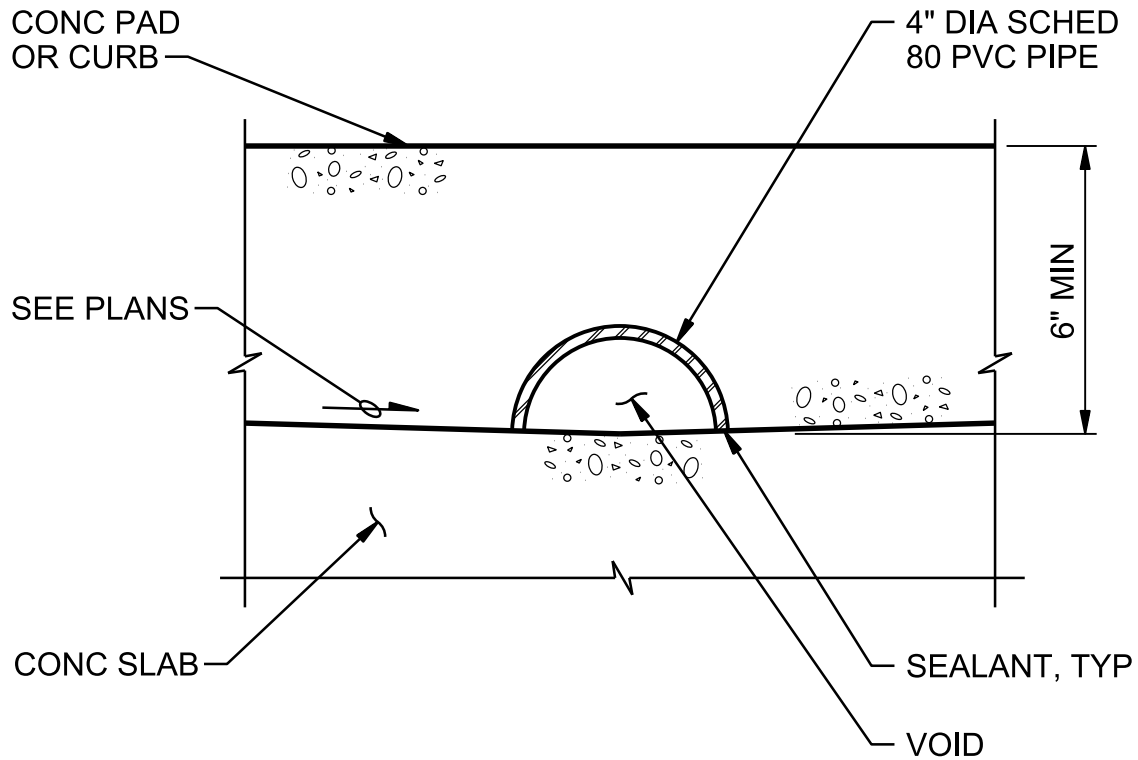
PIPE SUPPORT - CONCRETE SADDLE

NTS

DETAIL 4 OF 4

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-061



NOTE:

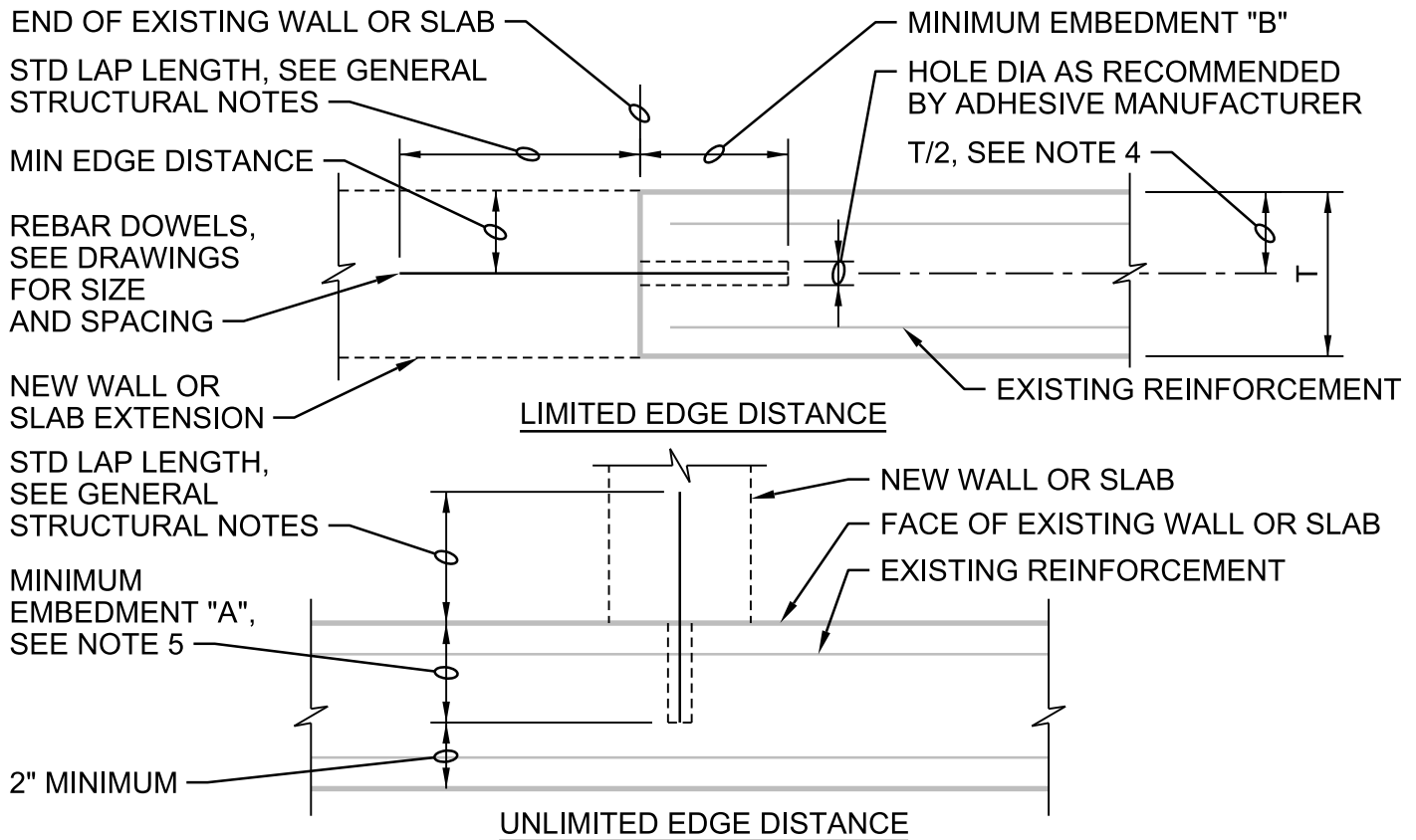
ANCHOR IN PLACE WITH SST STRAPPING AND ADHESIVE ANCHORS AS REQUIRED.

DRAINAGE BLOCKOUT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0330-083



DOWEL SIZE	MINIMUM EDGE DISTANCE	MINIMUM EMBEDMENT "A"	MINIMUM EMBEDMENT "B"
#3	2 1/2"	5"	8"
#4	3 1/2"	7"	11"
#5	4"	8"	13"
#6	5"	10 1/2"	16"
#7	6"	12 1/2"	20"
#8	7"	14"	22"
#9	7 1/2"	15"	24"

NOTES:

1. CONFORM TO REQUIREMENTS OF SPECIFICATION SECTION 03 63 00, CONCRETE DOWELING.
2. FOLLOW ADHESIVE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
3. USE MINIMUM EMBEDMENTS SHOWN, EXCEPT USE MANUFACTURER'S MINIMUM RECOMMENDED EMBEDMENT IF GREATER.
4. LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE 2 ROWS OF DOWELS INDICATED, STAGGER SPACING & LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.
5. PROVIDE MINIMUM EMBEDMENT "A" SHOWN IN TABLE UNLESS SHORTER EMBEDMENT DEPTH IS CALLED OUT ON DRAWINGS.

ADHESIVE DOWEL

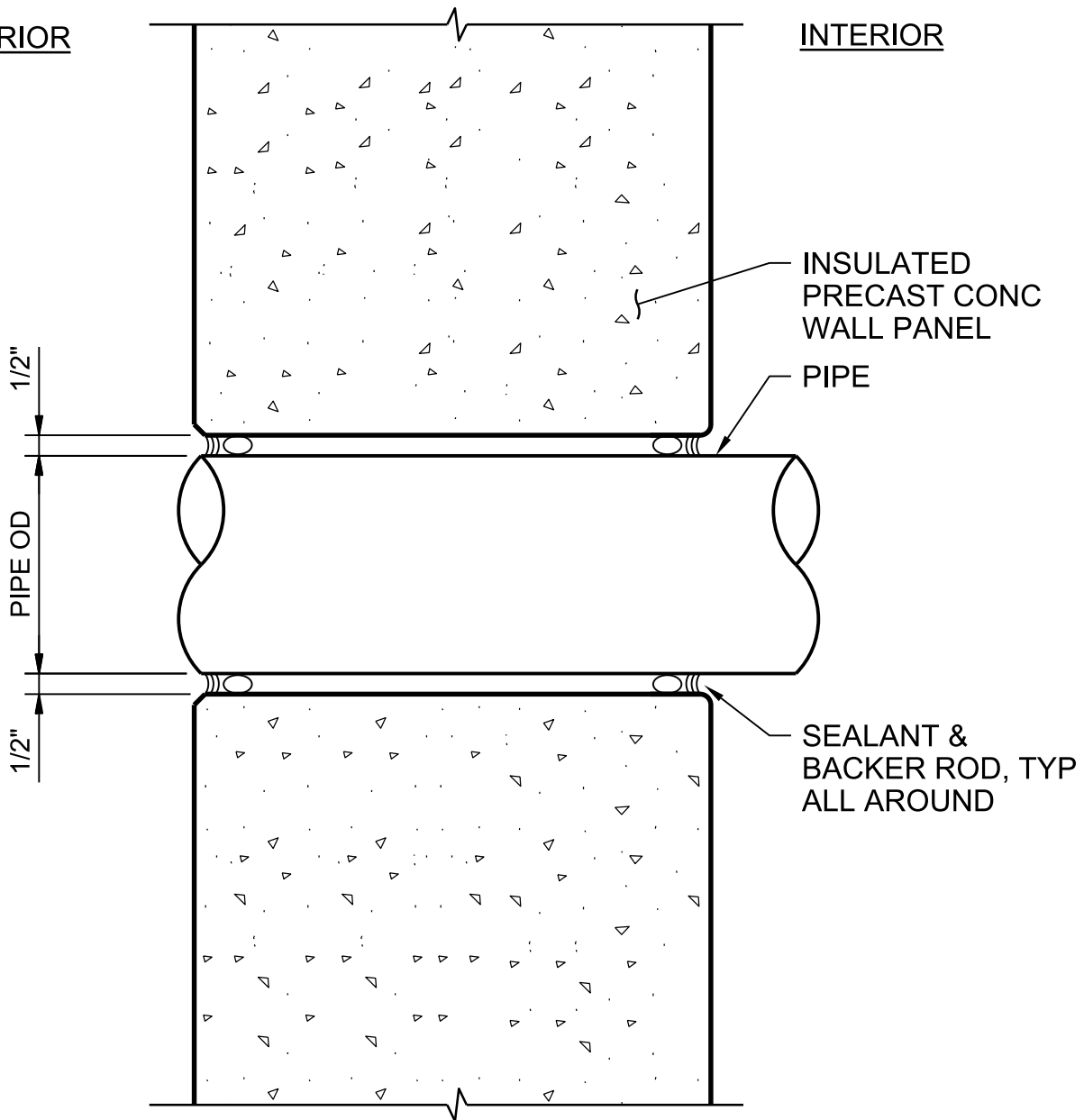
NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0330-105

EXTERIOR

INTERIOR

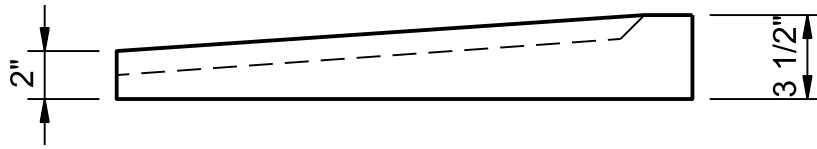


PIPE PENETRATION

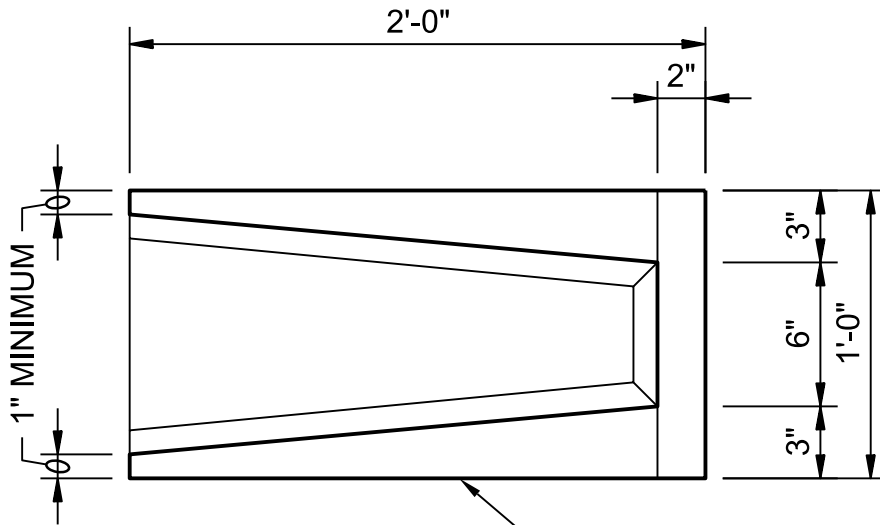
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0340-016



ELEVATION



PLAN

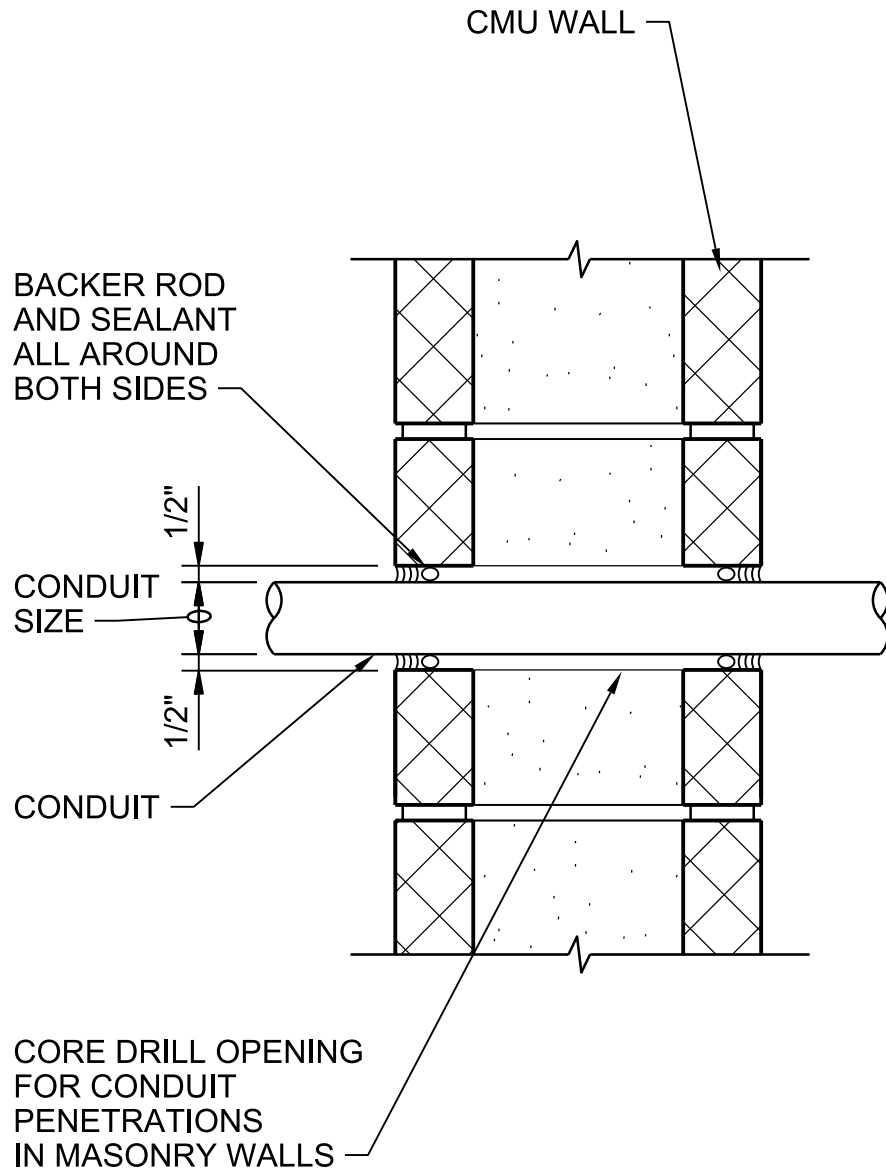
PRECAST
CONCRETE
SPLASHBLOCK

SPLASHBLOCK

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0340-095

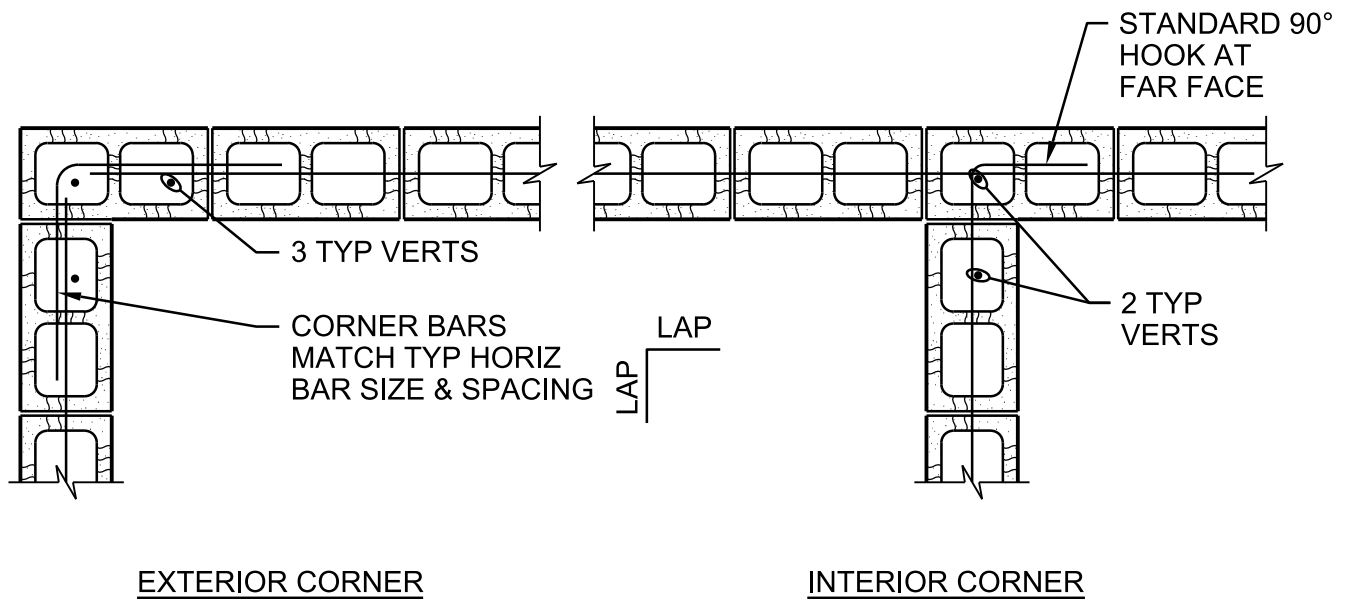


PIPE PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0420-104



SINGLE MAT PLAN FOR HORIZONTAL BARS

NOTES:

1. LAP=48 BAR DIAMETERS, BUT NOT LESS THAN 2'-0" FOR HORIZONTAL BARS UNLESS NOTED OTHERWISE.
2. AT OPENINGS, CONTROL JOINTS, OR CORNERS LESS THAN 6'-0" IN LENGTH, SEE DETAILS (0422-003), (0422-005) AND (0422-006).

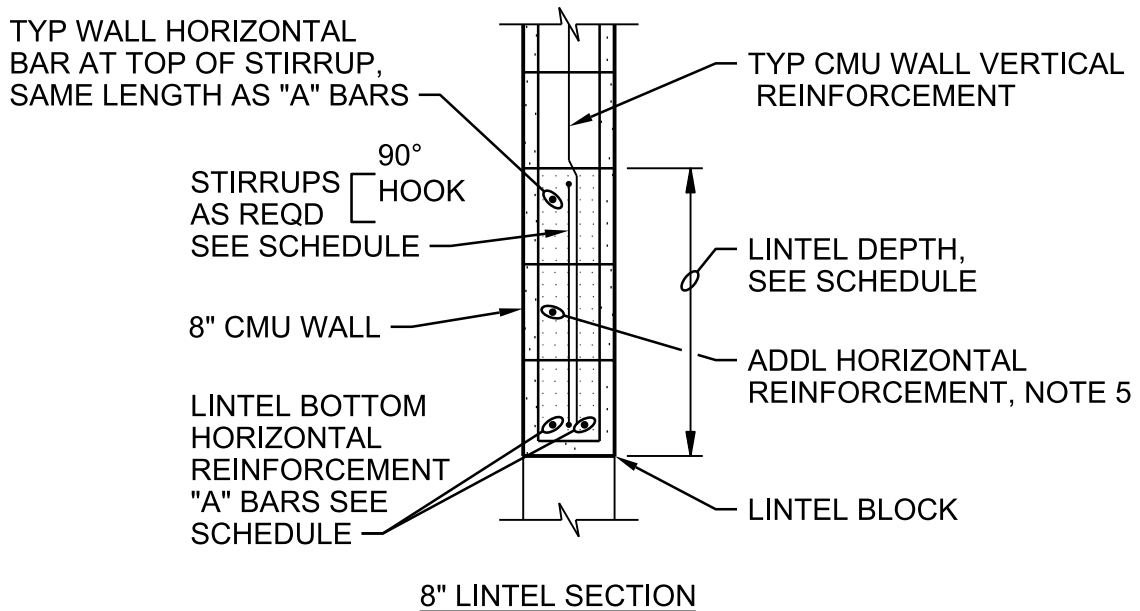
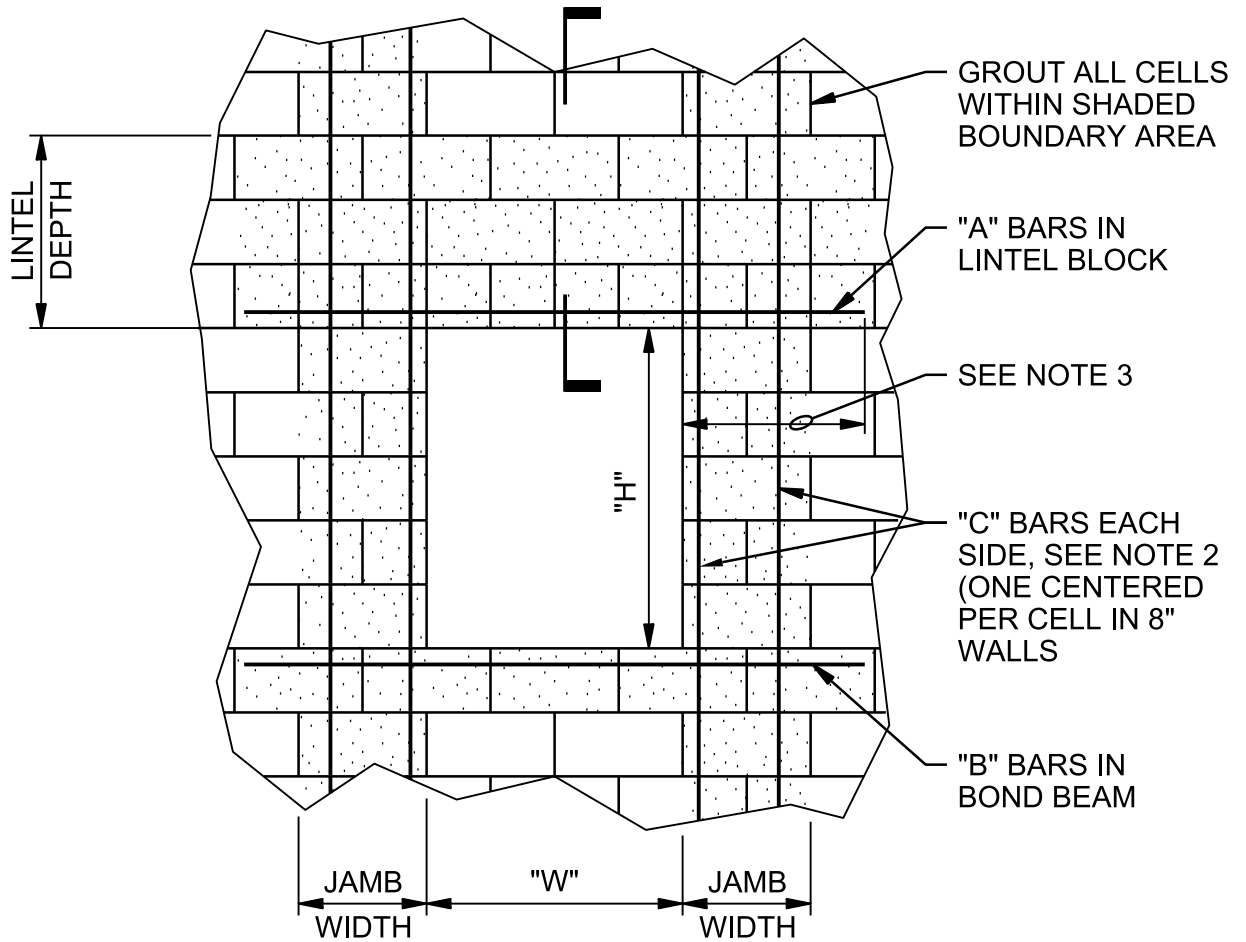
REINFORCED MASONRY

WALL CORNERS (SINGLE & DOUBLE MAT)

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0422-001



CMU OPENING REINFORCEMENT

NTS

DETAIL 1 OF 2

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0422-003

CMU OPENING REINFORCEMENT SCHEDULE						
8" WALLS						
W	LINTEL DEPTH	STIRRUP SIZE, SPG	"A" BARS	"B" BARS	"C" BARS	JAMB WIDTH
≤2'-8"	8"	-	1	1	1	8"
>2'-8"≤4'-0"	16"	-	2	1	1	8"
>4'-0"≤6'-0"	24"	#3@8"	2	1	2	16"
>6'-0"≤8'-0"	32"	#3@16"	2	2	3	24"
>8'-0"≤10'-0"	48"	#3@24"	2	2	3	24"

NOTES:

- USE BAR QUANTITIES AND SIZES GIVEN IN LINTEL SCHEDULE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- EXTEND "C" BARS 48 BAR DIAMETERS, BUT NOT LESS THAN 2'-0" BEYOND TOP AND BOTTOM OF OPENING EXCEPT THAT WHEN "H" OR "W" EXCEEDS 2'-0", "C" BARS SHALL EXTEND FULL HEIGHT.
- "A" AND "B" BARS SHALL EXTEND 48 BAR DIAMETERS, BUT NOT LESS THAN 2'-0" EACH SIDE OF THE OPENINGS. WHERE THERE IS LESS THAN 8'-0" BETWEEN ADJACENT OPENINGS, EXTEND REINFORCEMENT CONTINUOUS TO 2'-8" BEYOND FURTHEST OPENING.
- FOR BAR SIZES, MATCH TYPICAL WALL REINFORCEMENT AS SHOWN ON THE BUILDING WALL SECTIONS.
- FOR LINTEL DEPTHS EQUAL TO OR GREATER THAN 48" PROVIDE ADDITIONAL LAYER OF HORIZONTAL REINFORCEMENT AT 12" FROM BOTTOM OF LINTEL. MATCH SIZE OF TYPICAL WALL HORIZONTAL REINFORCEMENT.

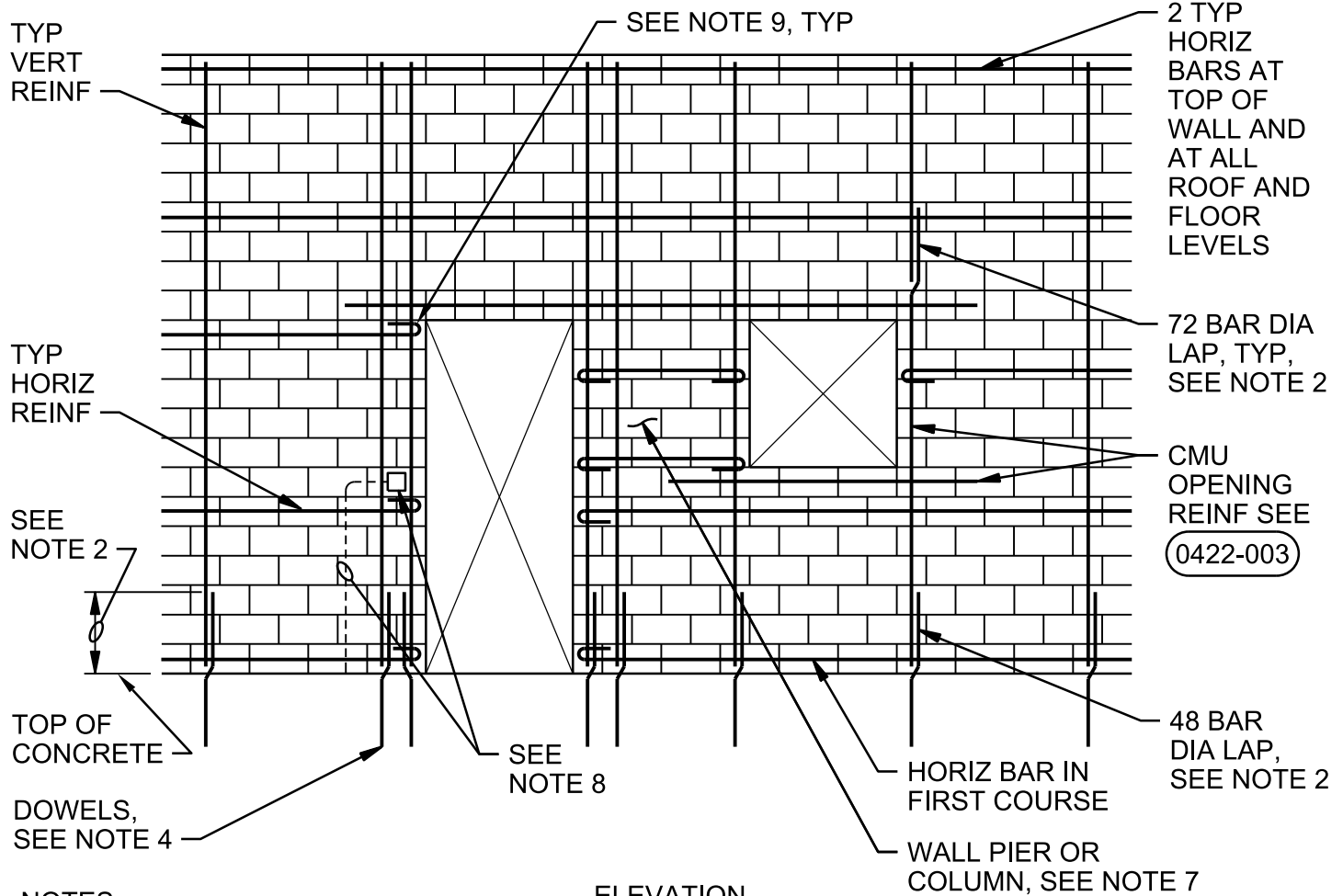
CMU OPENING REINFORCEMENT

NTS

DETAIL 2 OF 2

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0422-003

**NOTES:**

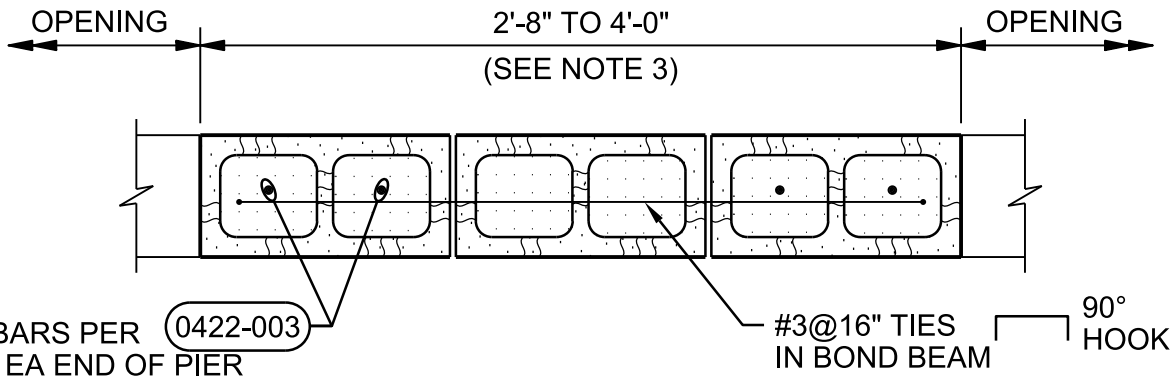
1. FOR TYPICAL WALL REINFORCEMENT, SEE WALL SECTIONS AND DETAILS FOR EACH FACILITY. FOR MINIMUM REINFORCEMENT REQUIREMENTS, SEE GENERAL STRUCTURAL NOTES.
2. LAP VERTICAL REINFORCEMENT WITH WALL DOWELS 48 BAR DIAMETERS (2'-0" MIN), LAP ALL OTHER VERTICAL BARS 72 BAR DIAMETERS.
3. STAGGER SPLICES IN ADJACENT HORIZONTAL BARS IN THE SAME COURSE BY 2'-0".
4. PROVIDE DOWEL BARS IN FOUNDATION TO MATCH ALL VERTICAL REINFORCEMENT.
5. FOR ADDED REINFORCEMENT AT WALL INTERSECTIONS AND CORNERS, SEE (0422-001).
6. GROUT EACH SIDE OF OPENING AS NOTED IN TYPICAL OPENING REINFORCEMENT DETAIL (0422-003).
7. FOR HORIZONTAL REINFORCEMENT AT OPENINGS SEE PIER AND COLUMN DETAILS (0422-005) AND (0422-006).
8. DO NOT PLACE VERTICAL CONDUIT IN THE SAME CELL AS VERTICAL REINFORCEMENT.
9. HOOK TYPICAL HORIZONTAL REINFORCEMENT WITH STANDARD 180° HOOK AROUND VERTICAL REINFORCEMENT AT EDGE OF OPENING AND WALL ENDS.

SPECIAL REINFORCED MASONRY SHEAR WALL

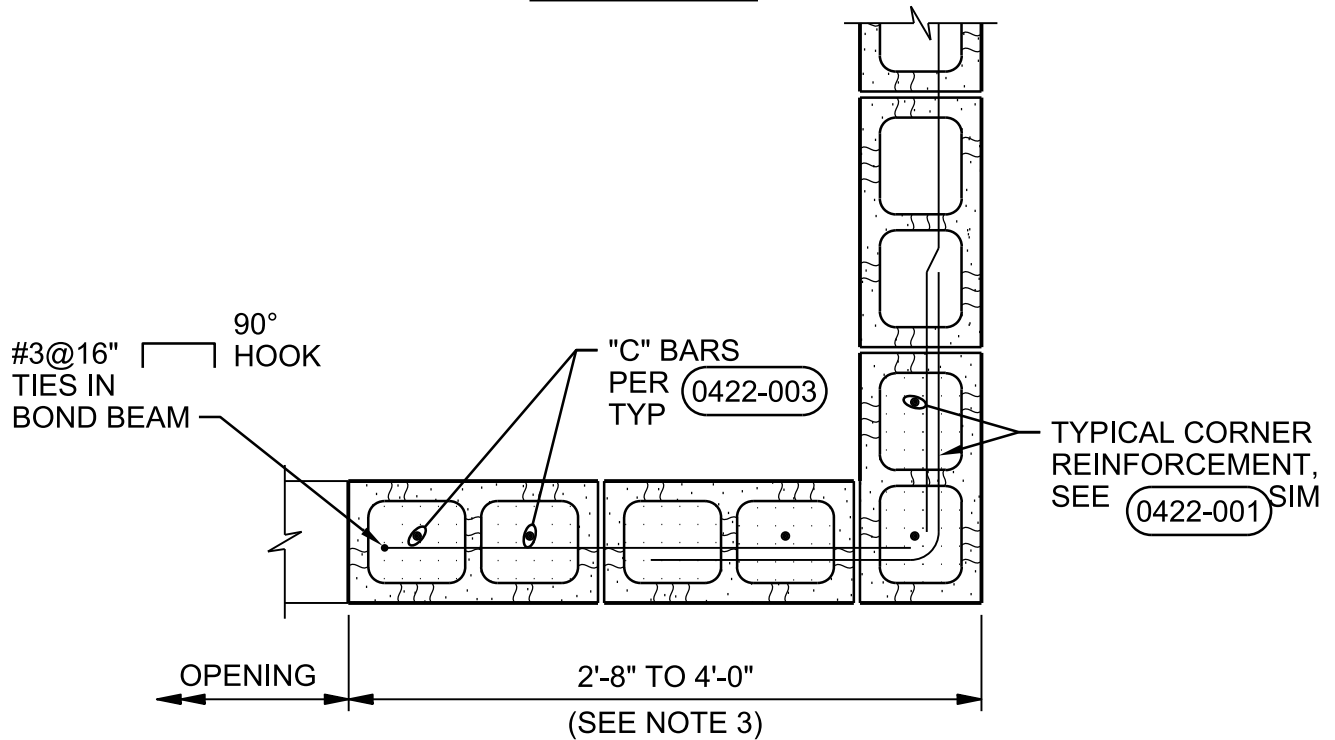
NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

(0422-004)



INTERIOR PLAN



CORNER PLAN

8\"/>

NOTES:

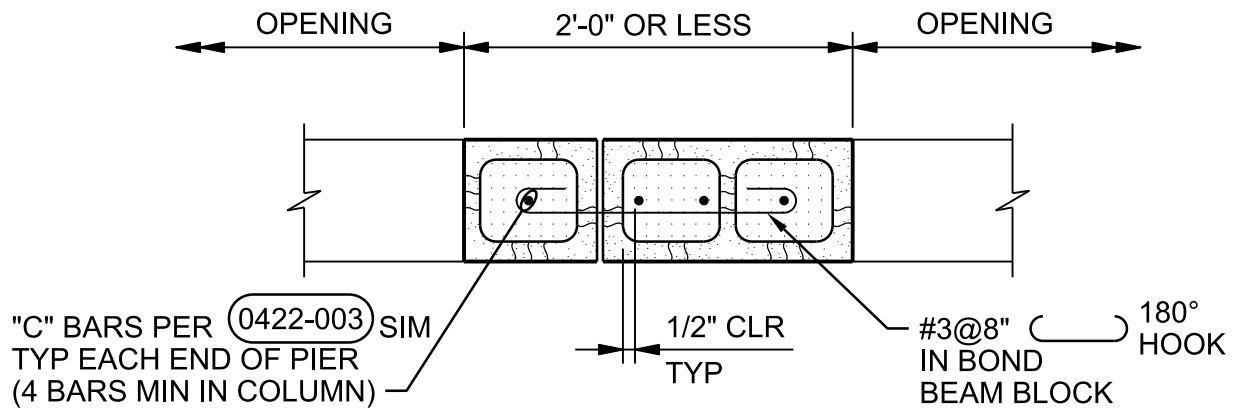
- 1. SOLID GROUT PIERS FULL WALL HEIGHT.
- 2. WHERE PIERS ARE CENTERED BELOW BEAM BEARING, REDUCE TIE SPACING TO 8\"/>
- 3. FOR 8\"/>

CMU WALL PIER

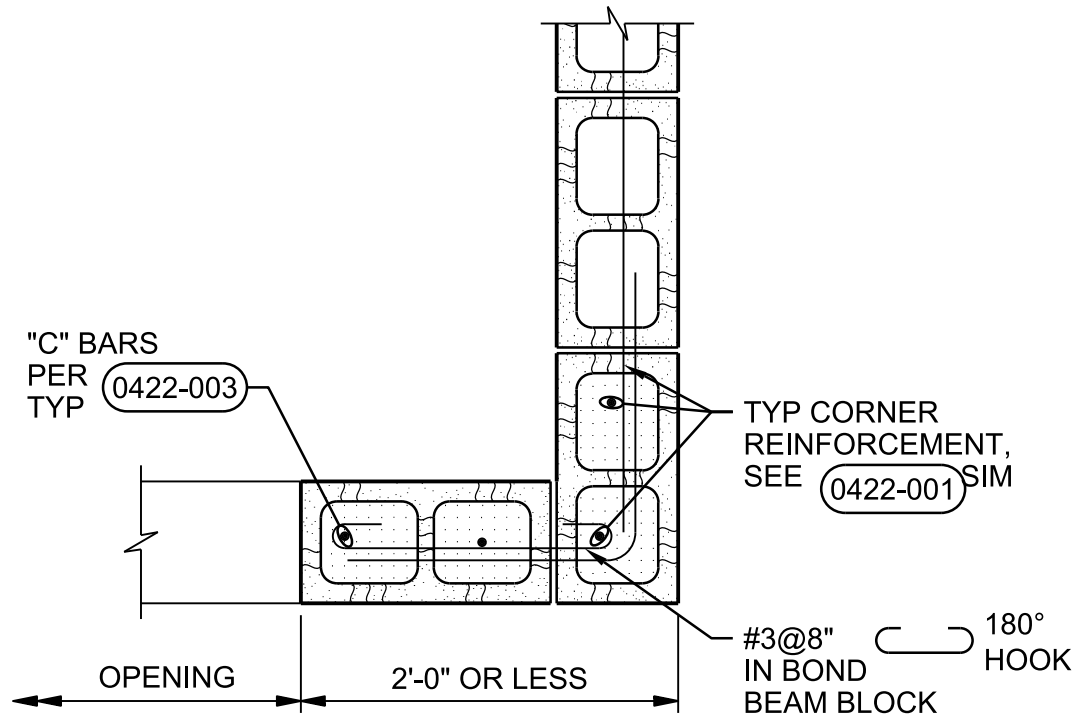
NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0422-005



INTERIOR PLAN



CORNER PLAN

8" CMU WALL

NOTE:

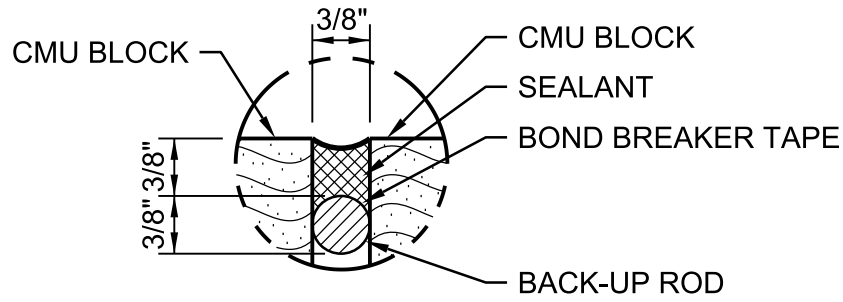
GROUT WALL COLUMNS FULL WALL HEIGHT.

CMU WALL COLUMN

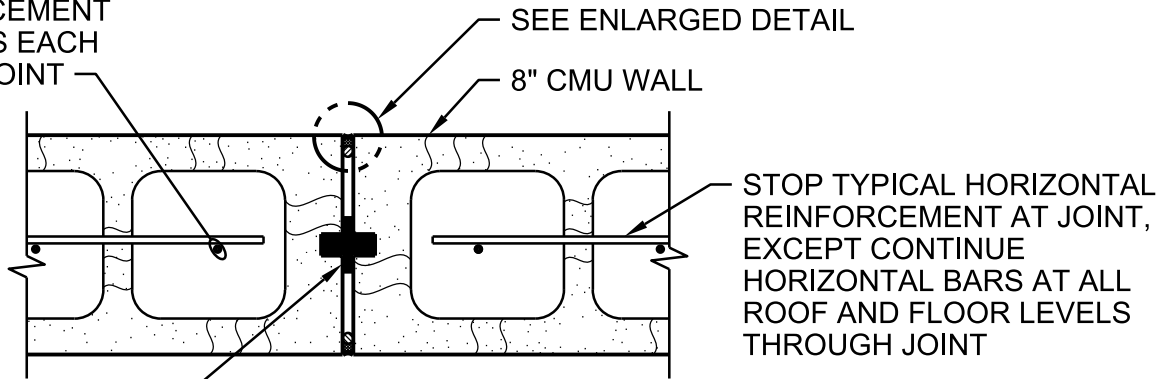
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0422-006



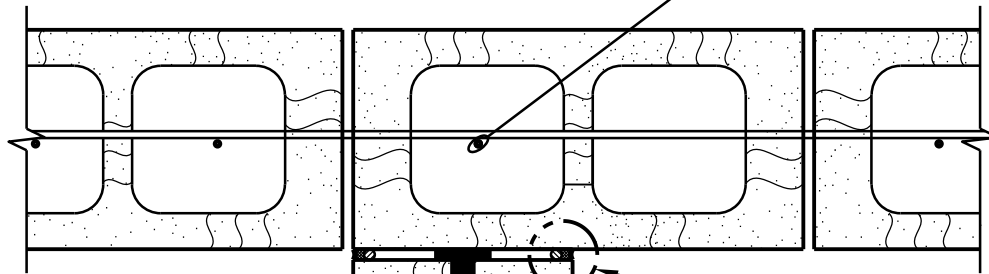
PROVIDE TYPICAL VERTICAL REINFORCEMENT IN 2 CELLS EACH SIDE OF JOINT



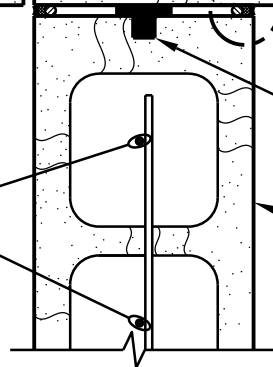
PREFABRICATED CONTROL JOINT

STRAIGHT WALL

PROVIDE TYPICAL VERTICAL REINFORCEMENT IN CELL CENTERED ON JOINT



PROVIDE TYPICAL VERTICAL REINFORCEMENT IN TWO CELLS



T-WALL

NOTE:

- 1. FOR MASONRY CONTROL JOINT LOCATIONS SEE PLANS.

CMU CONTROL JOINT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0422-031

T.O. CURB, REFER
TO STRUCT DWGS

SEALANT OVER PJF
EXTERIOR PAVING,
SEE CIVIL, TYP

CONCRETE SLAB, SEE
STRUCTURAL DWGS

FF EL 30.50

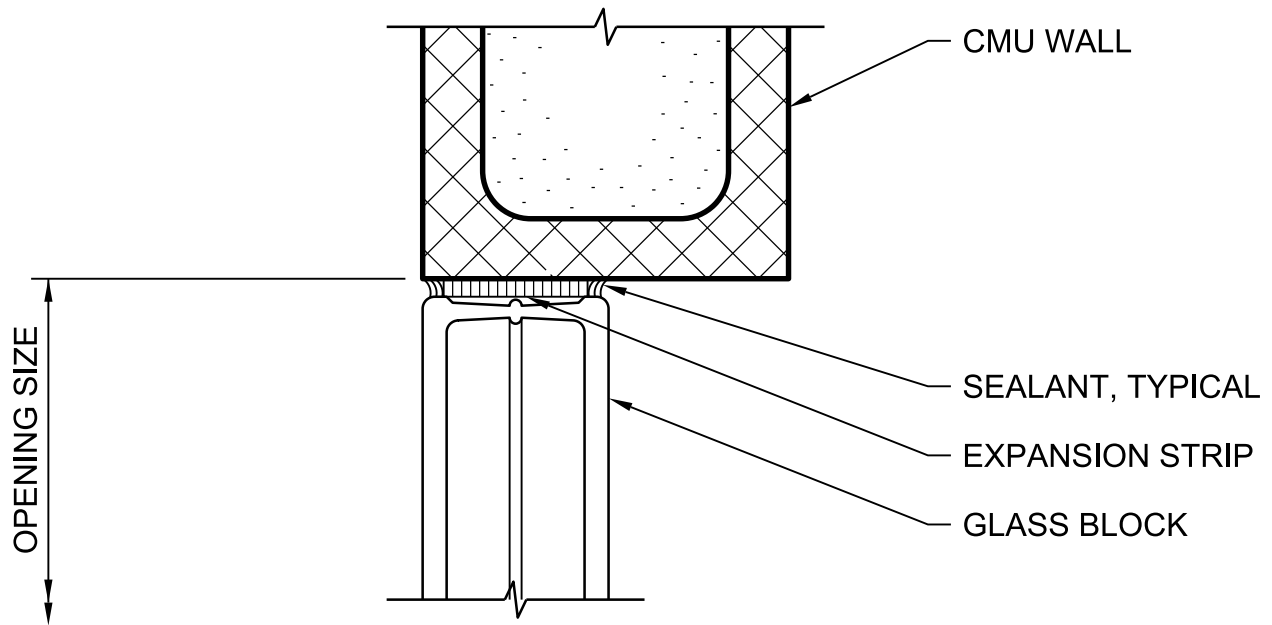
SEE STRUCTURAL

CMU WALL BASE

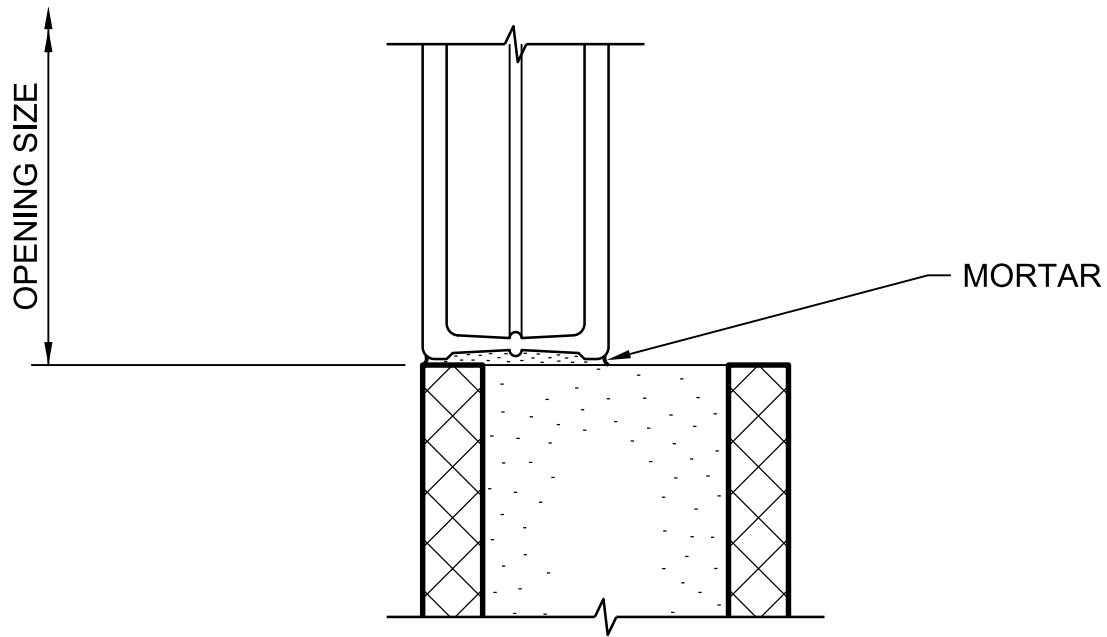
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0422-101



(JAMB SIMILAR)
HEAD



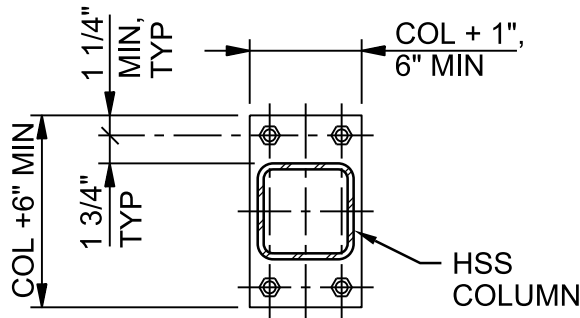
SILL

GLASS BLOCK HEAD AND SILL

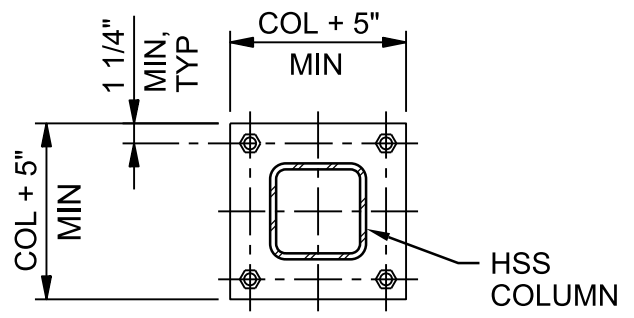
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

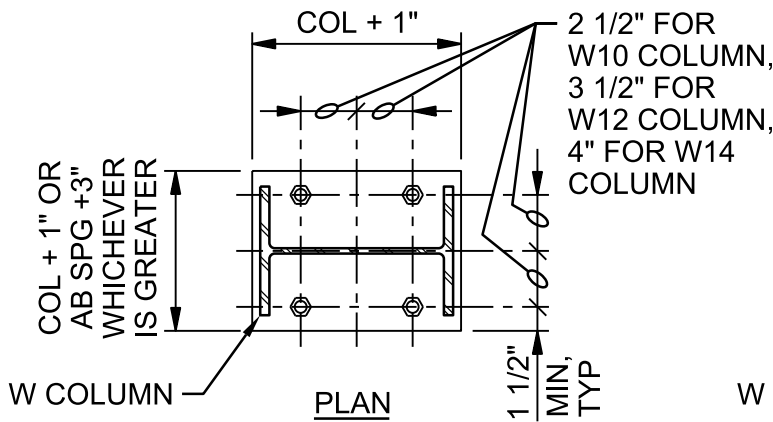
0423-002



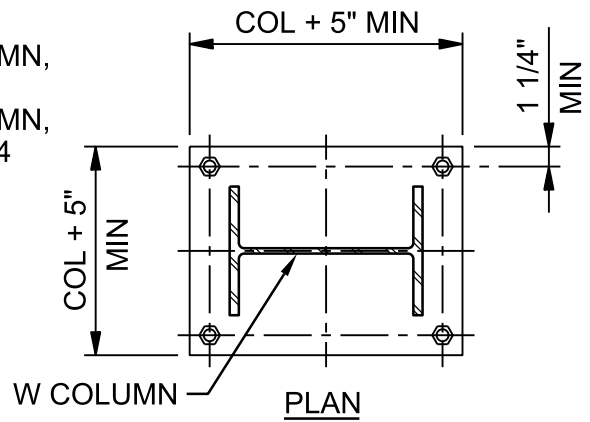
PLAN



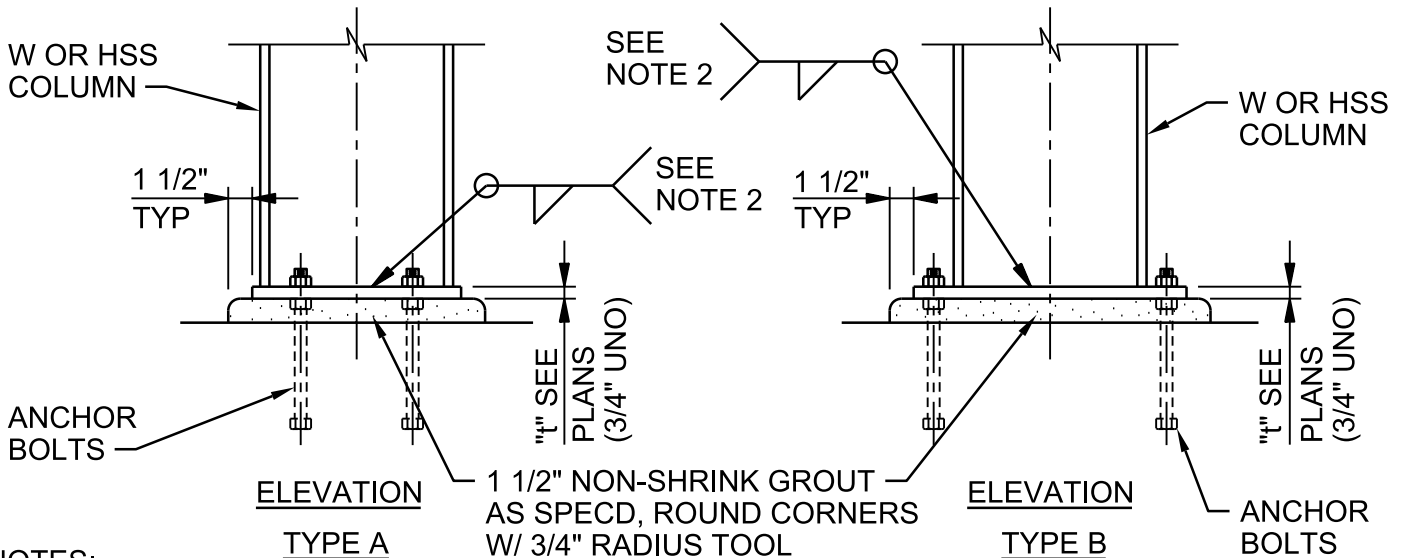
PLAN



PLAN



PLAN



ELEVATION

TYPE A

ELEVATION

TYPE B

NOTES:

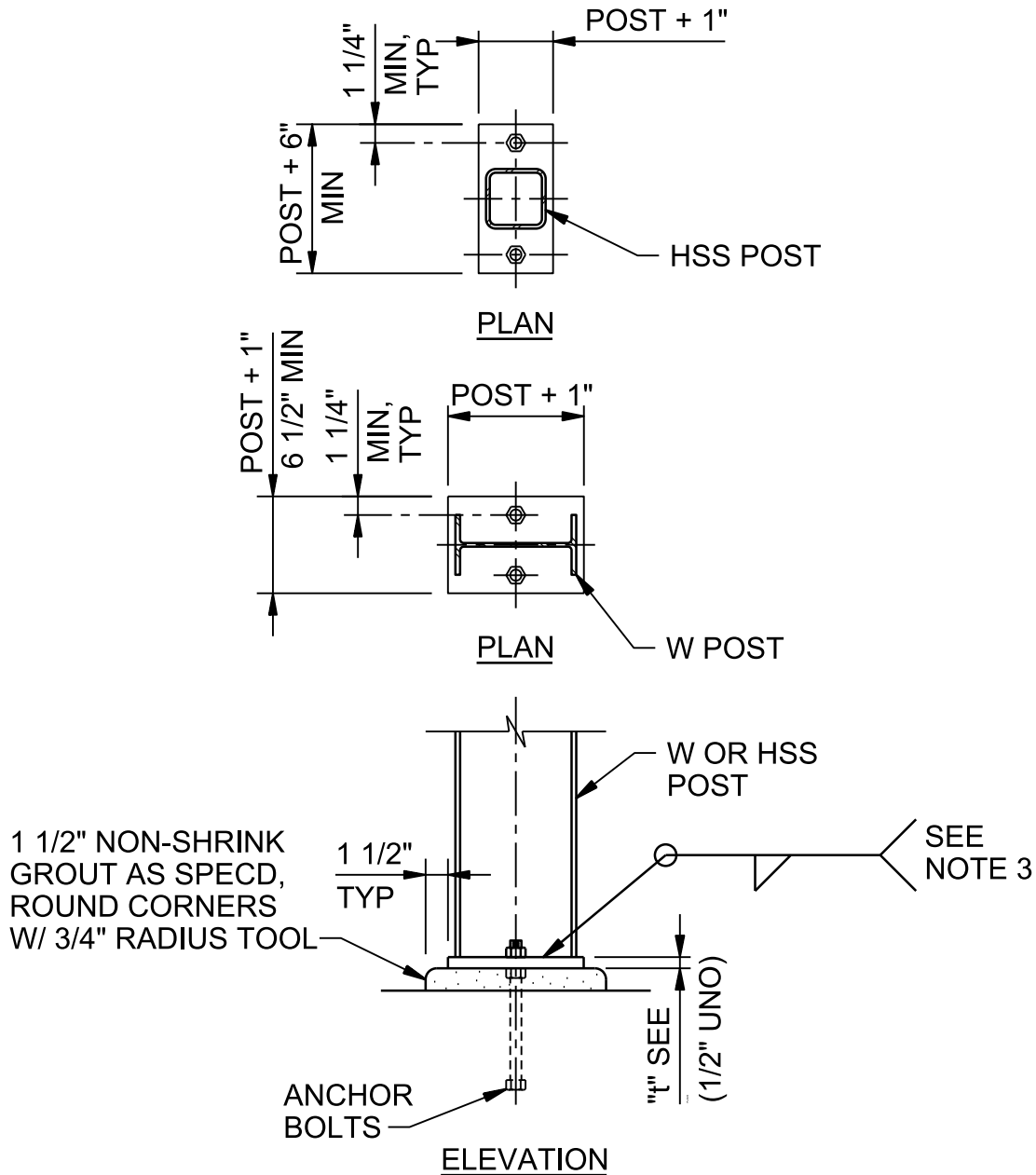
1. UNLESS OTHERWISE NOTED, ANCHOR BOLTS SHALL BE 3/4" DIA x REQUIRED WITH LEVELING NUTS AND 1'-0" MINIMUM EMBED AND BASEPLATES SHALL BE CENTERED ON COLUMN.
2. WELD SIZE SHALL BE DETERMINED BY THE THICKEST MEMBER JOINED; MINIMUM WELD SIZE SHALL BE 3/16" FILLET FOR MATERIAL THICKNESSES UP TO AND INCLUDING 1/2", 1/4" FILLET FOR THICKNESSES OVER 1/2" TO 3/4", AND 5/16" FILLET FOR MATERIAL THICKNESSES OVER 3/4". ALL WELDS SHALL BE SINGLE-PASS WELDS.

COLUMN BASE - STEEL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0512-001

**NOTES:**

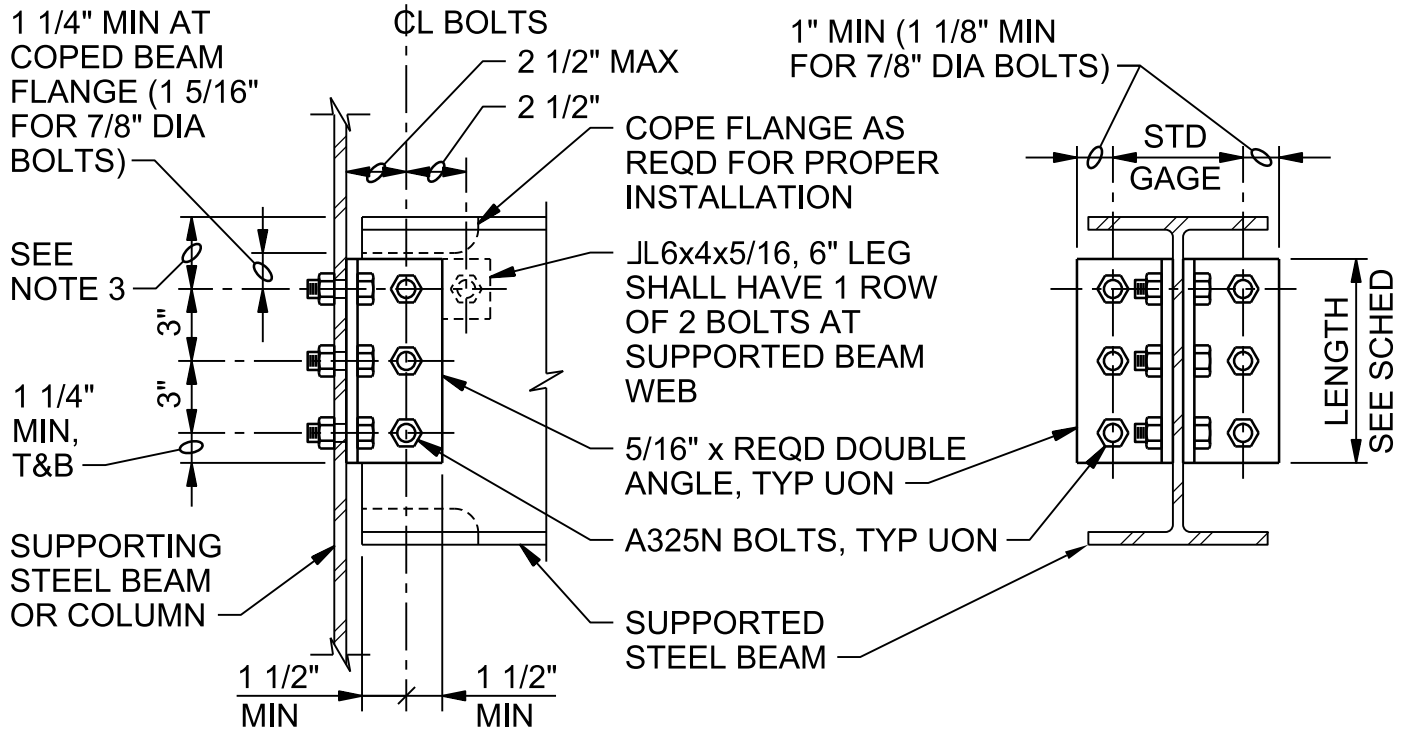
1. UNLESS OTHERWISE NOTED, ANCHOR BOLTS SHALL BE 3/4" DIA x REQUIRED WITH LEVELING NUTS AND 1'-0" MINIMUM EMBED AND BASEPLATES SHALL BE CENTERED ON POSTS.
2. USE OF 2 - BOLT STEEL POST BASEPLATE ANCHORAGE DETAIL SHOWN SHALL BE LIMITED TO STEEL SUPPORT MEMBERS WEIGHING LESS THAN 300 LBS IN ACCORDANCE WITH OSHA STANDARDS.
3. WELD SIZE SHALL BE DETERMINED BY THE THICKEST MEMBER JOINED; MINIMUM WELD SIZE SHALL BE 3/16" FILLET FOR MATERIAL THICKNESSES UP TO AND INCLUDING 1/2", 1/4" FILLET FOR THICKNESSES OVER 1/2" TO 3/4", AND 5/16" FILLET FOR MATERIAL THICKNESSES OVER 3/4". ALL WELDS SHALL BE SINGLE-PASS WELDS.

POST BASE - STEEL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0512-002



NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	BOLT DIA, INCHES	DOUBLE ANGLE, LENGTH, INCHES	COMMENTS
36	10	7/8"	2'-6"	ANGLE THK = 3/8"
33	9	7/8"	2'-3"	ANGLE THK = 3/8"
30	8	7/8"	2'-0"	ANGLE THK = 3/8"
27	7	3/4"	1'-8 1/2"	-
24	6	3/4"	1'-5 1/2"	-
21	5	3/4"	1'-2 1/2"	-
16-18	4	3/4"	0'-11 1/2"	-
12-15	3	3/4"	0'-8 1/2"	-
8-10	2	3/4"	0'-5 1/2"	-
6	1	3/4"	0'-3"	JL 6"x4"x5/16"
4	1	3/4"	0'-2 1/2"	JL 6"x4"x5/16"

NOTES:

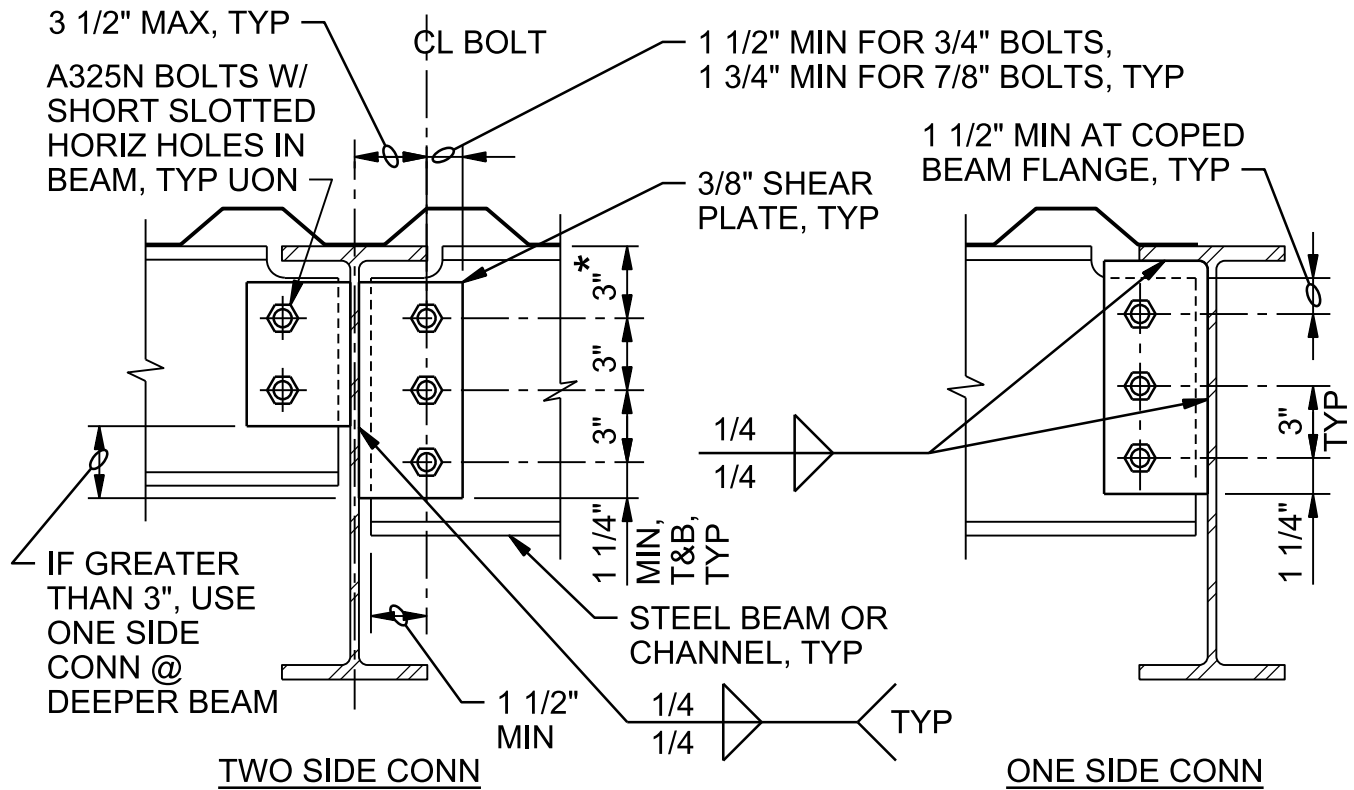
1. ALL BEAM FRAMING CONNECTIONS SHALL CONFORM TO THIS DETAIL UNLESS SPECIFICALLY NOTED OTHERWISE OR APPROVED IN WRITING BY THE ENGINEER.
2. PROVIDE ADDITIONAL 1 1/2" LENGTH TO DOUBLE ANGLE FOR STAGGERED BOLT CONNECTIONS WHEN REQUIRED OR USED.
3. DIMENSION SHALL BE 3" UNLESS OTHERWISE REQUIRED FOR PROPER FABRICATION.

TYPICAL BEAM CONNECTION - STEEL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0512-020



NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	BOLT DIA, INCHES	LENGTH OF SHEAR PLATE
27	8	7/8"	2'-0"
24	7	3/4"	1'-8 1/2"
21	6	3/4"	1'-5 1/2"
18	5	3/4"	1'-2 1/2"
16	4	3/4"	11 1/2"
12-15	3	3/4"	8 1/2"
8-10	2	3/4"	5 1/2"

NOTES:

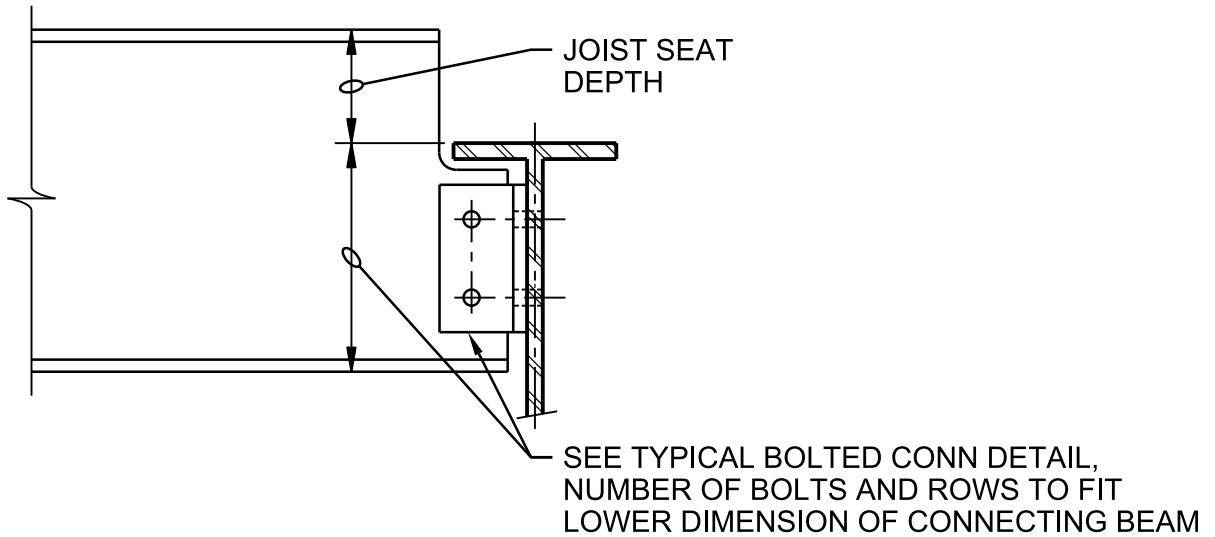
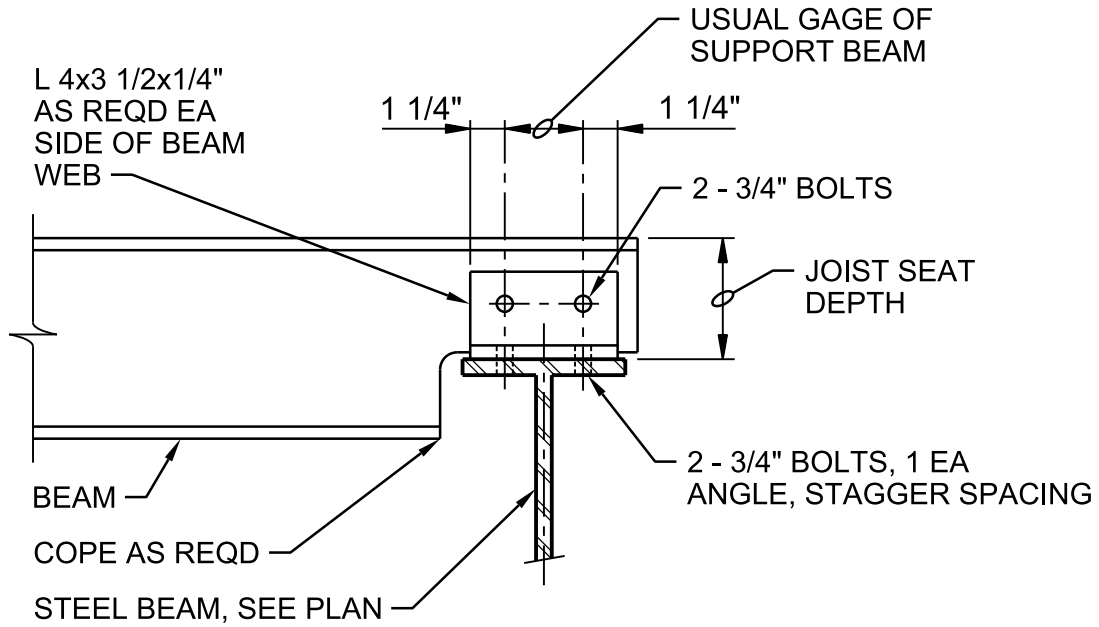
1. THIS DETAIL APPLIES ONLY WHERE SPECIFICALLY SHOWN ON DRAWINGS.
2. CONNECTION DETAIL SHOWN APPLICABLE ONLY TO BEAMS BRACED BY METAL DECK (COMPOSITE OR NON-COMPOSITE); FOR OTHER BEAM FRAMING CONDITIONS, SEE DETAIL (0512-020).
3. (*) DIMENSION SHALL BE 3" UNLESS OTHERWISE REQUIRED FOR PROPER FABRICATION.

BEAM SINGLE PLATE SHEAR CONNECTION - STEEL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0512-022

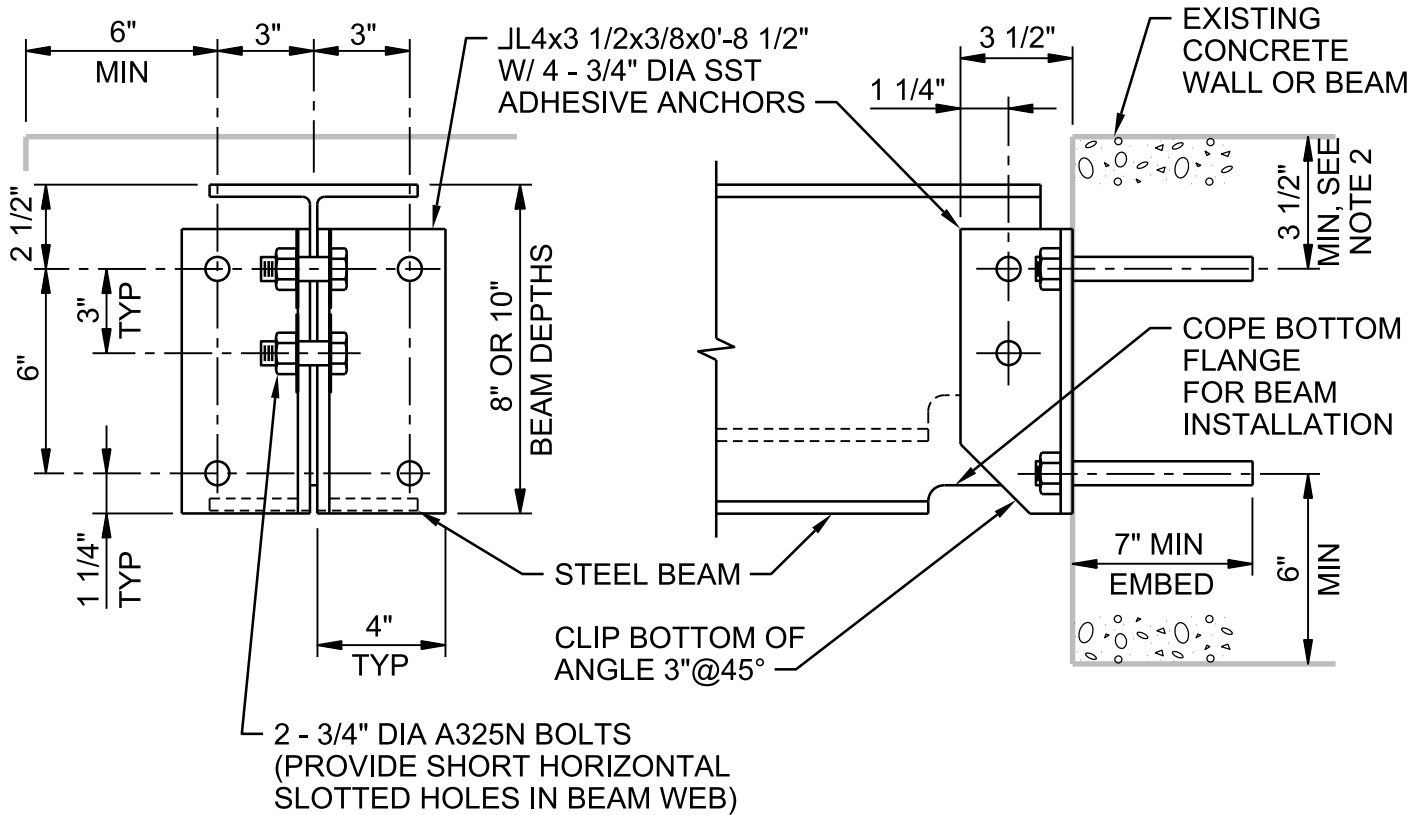
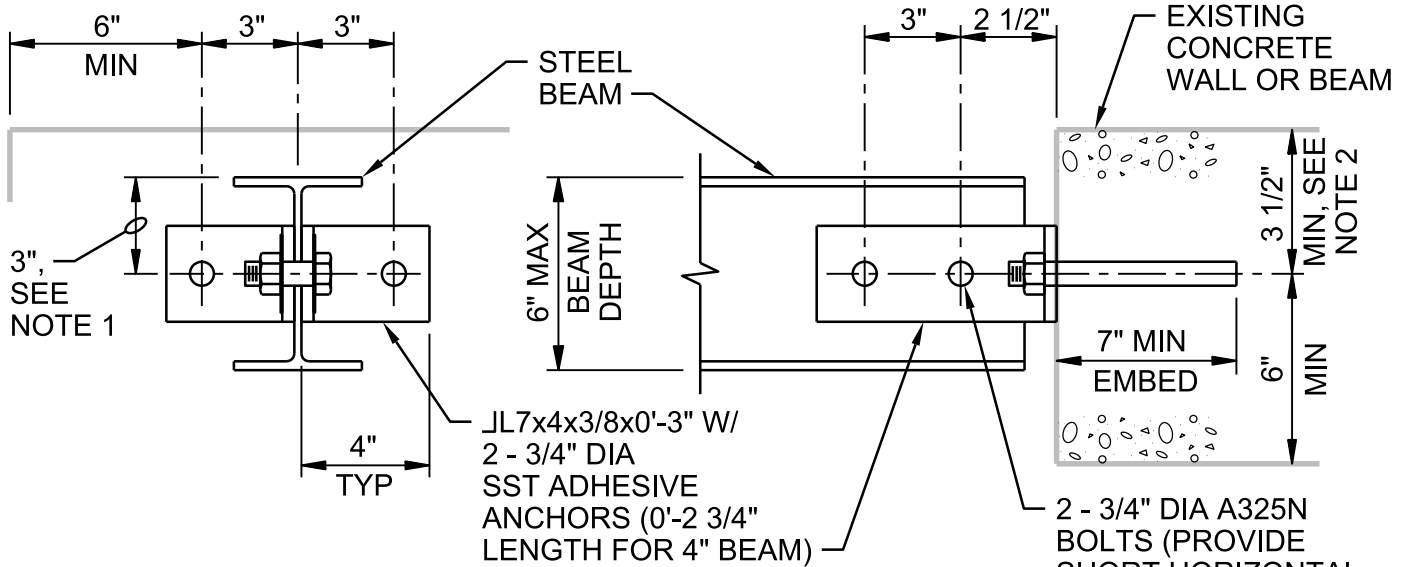


COPED BEAM CONNECTION - STEEL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0512-026



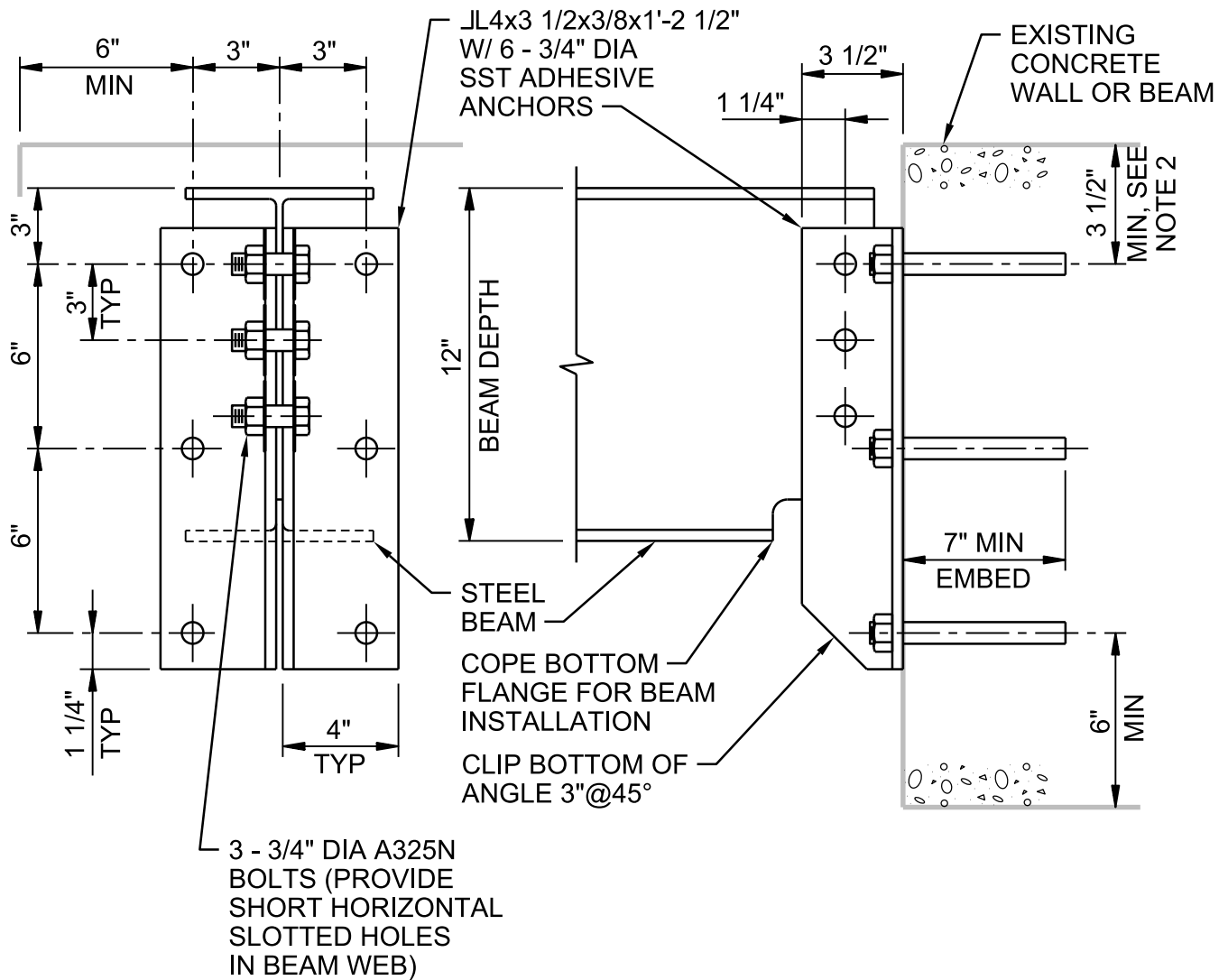
BEAM / WALL CONNECTION - STEEL

NTS

DETAIL 1 OF 2

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0512-056



3 - 3/4" DIA A325N BOLTS (PROVIDE SHORT HORIZONTAL SLOTTED HOLES IN BEAM WEB)

NOTES:

1. 3" DIMENSION TYPICAL EXCEPT 2 1/2" FOR 5" BEAMS AND 2" FOR 4" BEAMS.
2. DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION WITH GROUND PENETRATING RADAR OR OTHER ACCEPTABLE MEANS. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.
3. WHERE BOTH ENDS OF BEAM ARE ATTACHED TO A WALL, PROVIDE LONG HORIZONTALLY SLOTTED HOLES IN BEAM WEB AT ONE END. TIGHTEN NUTS SNUG TIGHT, BACK OFF 1/2 TURN, AND LOCK WITH DOUBLE NUT.

BEAM / WALL CONNECTION - STEEL

NTS

DETAIL 2 OF 2

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0512-056

DECKING LEDGER
SUPPORT ANGLE
(TOP OF ANGLE
TO MATCH TOP OF
BEAM ELEVATION)
(0531-001)

1/4
1/4

4"
MAX

GROUT CELL EACH
SIDE OF BLOCKOUT

STANDARD OVERSIZED
HOLES

STEEL BEAM,
SEE FRAMING PLANS

2"
TYP

3/4"
CLR
1 1/2"
TYP

CL WALL & BEARING

CLOSURE PLATE (0558-002)
FILL VOID AROUND
BEAM W/ FIRESAFING

PLAN

CONTINUE FACE SHELLS
OF MASONRY ACROSS
SEAT BLOCKOUT

2 - 3/4"x0'-10" ANCHOR
BOLTS W/ LEVELING
NUTS & 2 - HEAVY
WASHERS

2"

BLOCKOUT DEPTH,
SEE NOTE 1

2"

PL 3/4x4

NON-SHRINK GROUT
MASONRY EXTERIOR
BEARING WALL

ELEVATION

8" BOND BEAM W/ 2 TYP
HORIZONTAL BARS
CONTINUOUS (#5 MIN) ABOVE
AND BELOW BLOCKOUT
(5'-4" MIN LENGTH CENTERED
ON SINGLE BEAM SEAT)

NOTE:

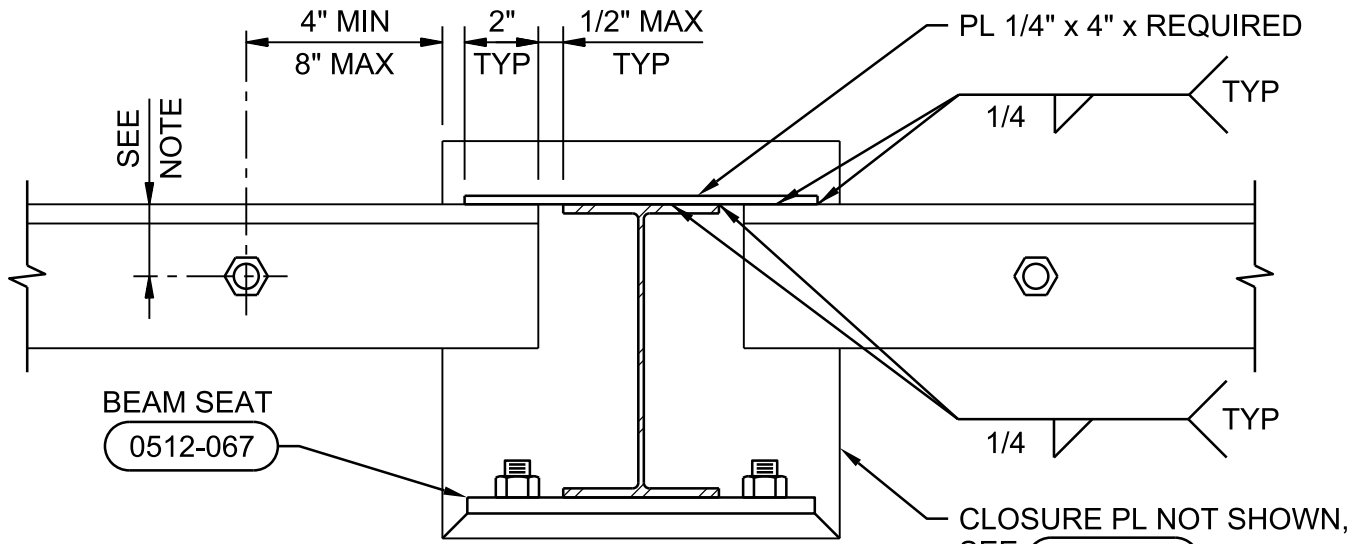
PROVIDE BLOCKOUT DEPTH AS REQUIRED FOR SETTING BEAMS, (BEAM DEPTH + 6") MIN,
OR SET BEAMS BEFORE COMPLETING WALL ABOVE.

BEAM SEAT/EXTERIOR WALL - STEEL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0512-067

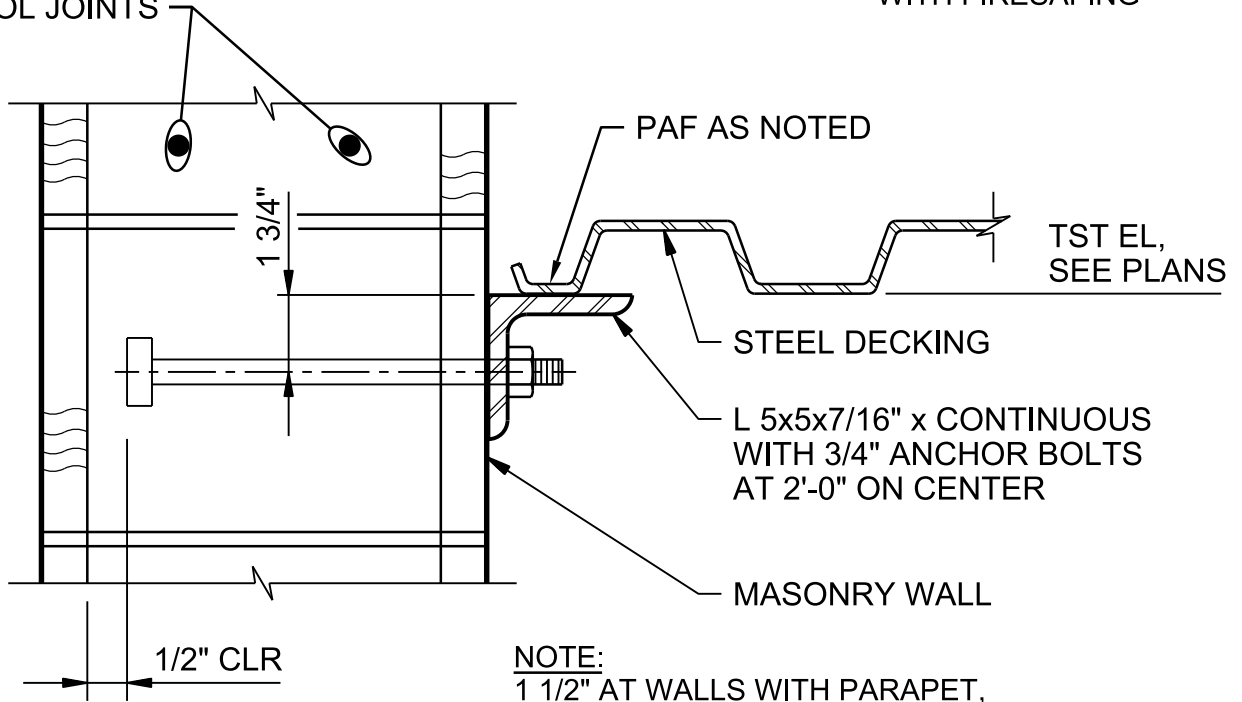


2 - TYPICAL HORIZONTAL BAR ABOVE BEAM POCKET, CONTINUOUS, INCLUDING THROUGH ALL CONTROL JOINTS

ELEVATION

CLOSURE PL NOT SHOWN, SEE 0558-002

INSTALL AT WALL FACE BEHIND ANGLES. FILL VOID AROUND BEAM WITH FIRESAFING



SECTION

NOTE:

THIS DETAIL APPLIES TO LEDGER ANGLE SUPPORT PARALLEL WITH DECK SPAN. FOR PERPENDICULAR TO DECK SPAN LEDGER, SEE 0531-001

TOP OF WALL SUPPORT LEDGER

NTS

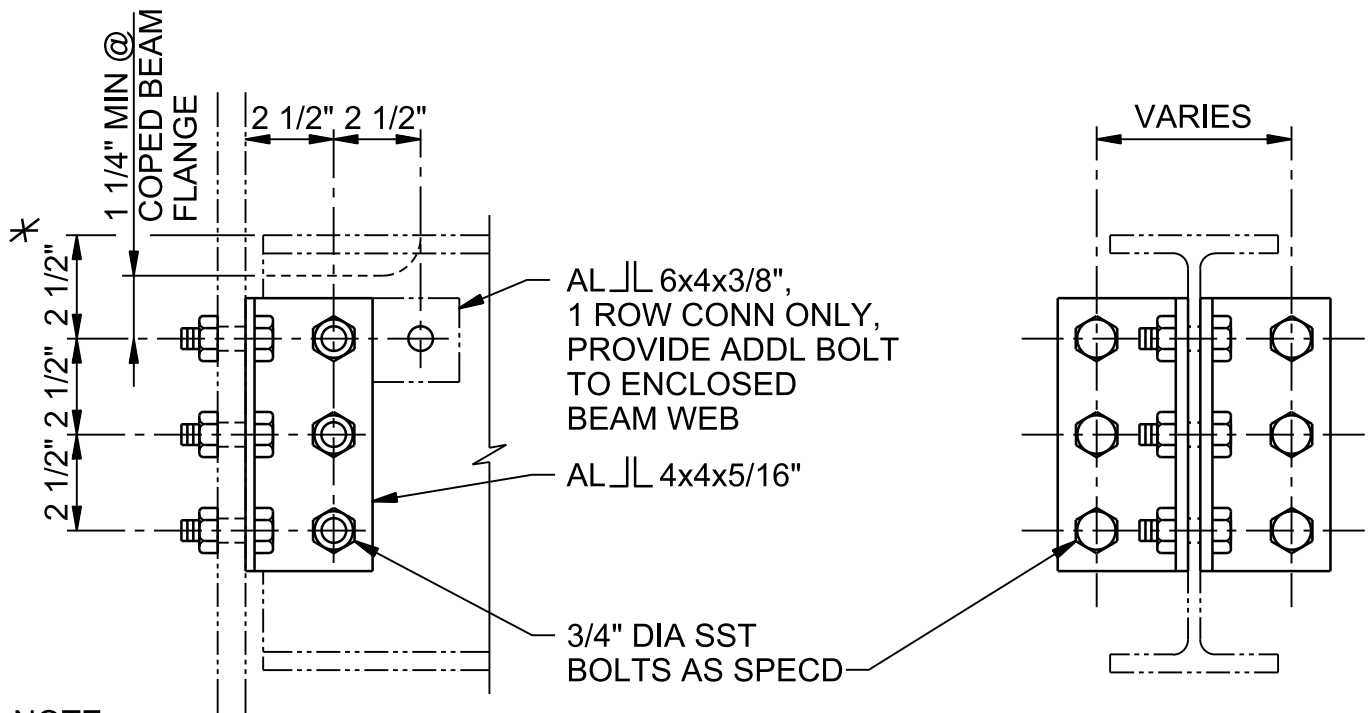
PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0512-069

ALUMINUM		
NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	LENGTH OF ANGLE
10	3	7 1/2"
7-8-9	2	5"
5-6	1	3"
4	1	2 3/4"

NOTES:

1. NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSED WEB.
2. ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OTHERWISE ON FRAMING PLANS.



NOTE:

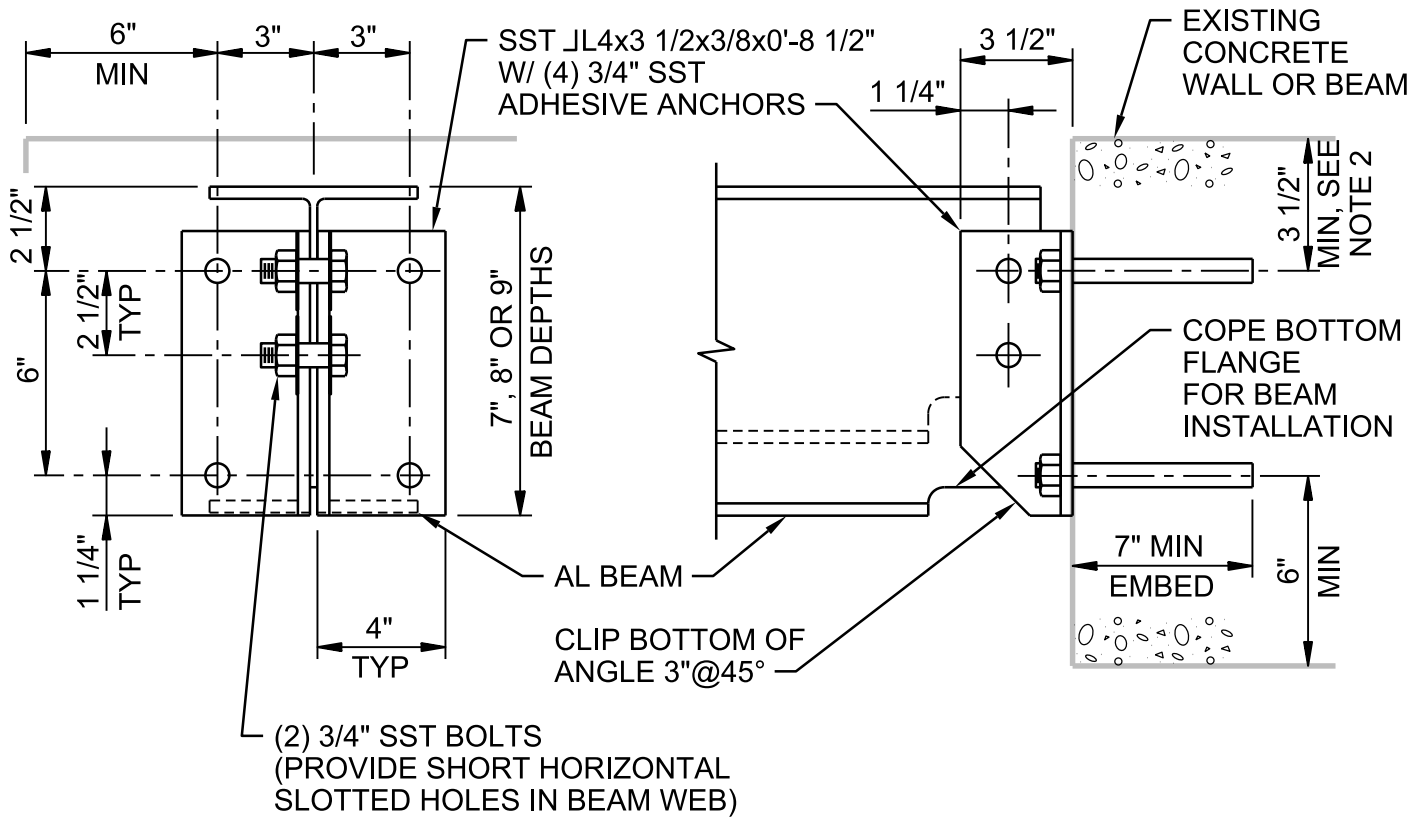
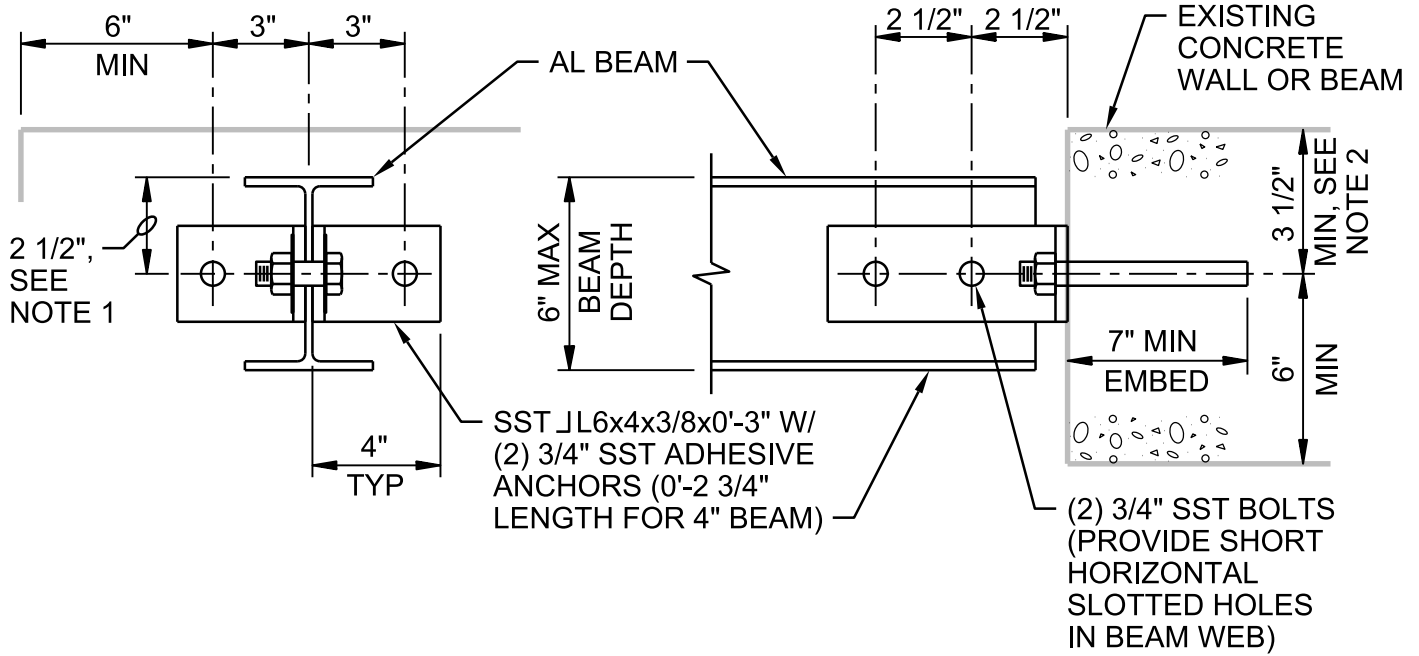
* 2 1/2" DIMENSION TYPICAL EXCEPT 2" FOR 4" BEAM.

TYPICAL BEAM CONNECTION - ALUMINUM

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0514-020



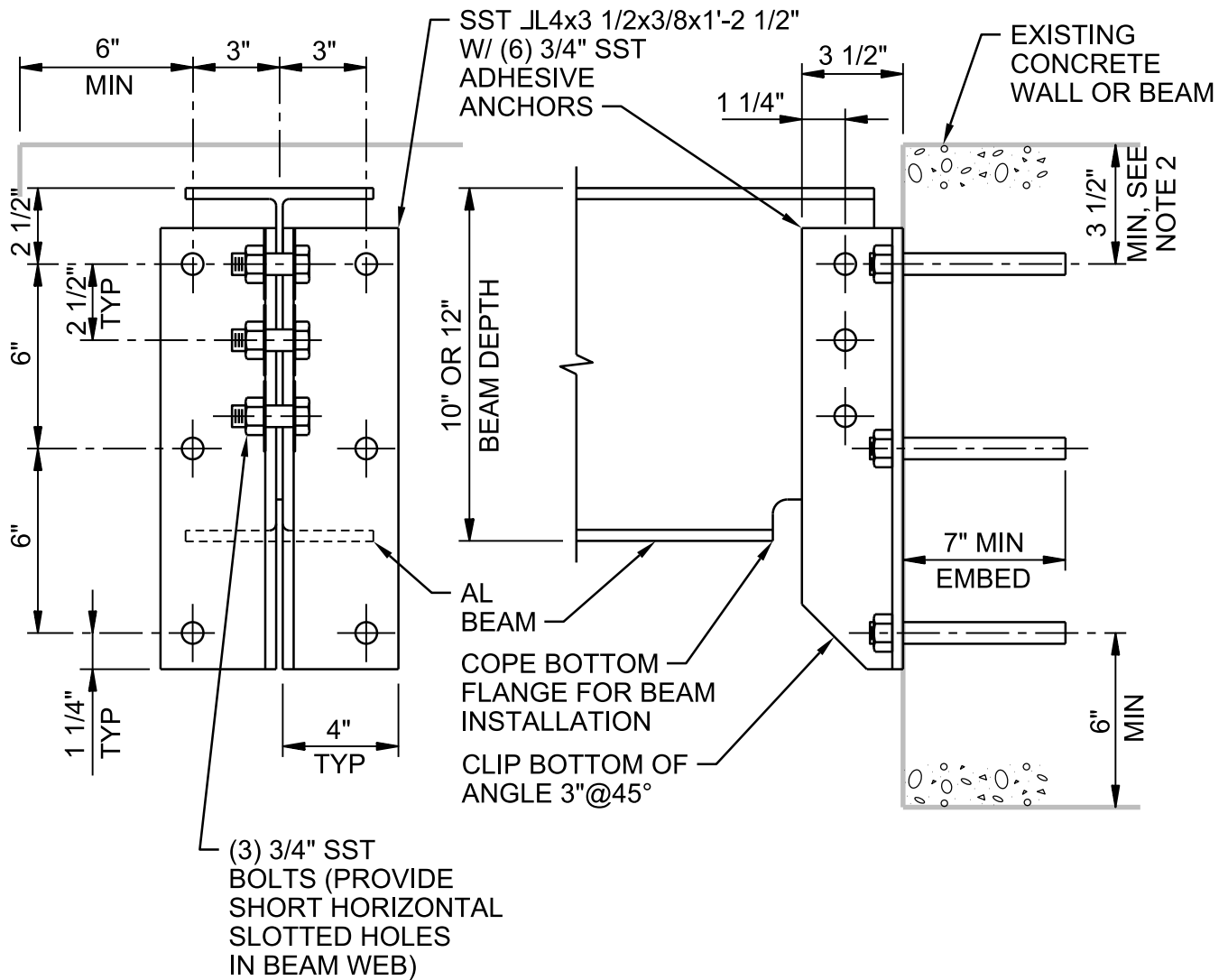
BEAM / WALL CONNECTION - ALUMINUM

NTS

DETAIL 1 OF 2

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0514-056



NOTES:

1. 2 1/2" DIMENSION TYPICAL EXCEPT 2" FOR 4" BEAMS.
2. DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION WITH GROUND PENETRATING RADAR OR OTHER ACCEPTABLE MEANS. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.
3. WHERE BOTH ENDS OF BEAM ARE ATTACHED TO A WALL, PROVIDE LONG HORIZONTALLY SLOTTED HOLES IN BEAM WEB AT ONE END. TIGHTEN NUTS SNUG TIGHT, BACK OFF 1/2 TURN, AND LOCK WITH DOUBLE NUT.
4. PROVIDE PROTECTION FOR DISSIMILAR MATERIALS PER SPECIFICATIONS.

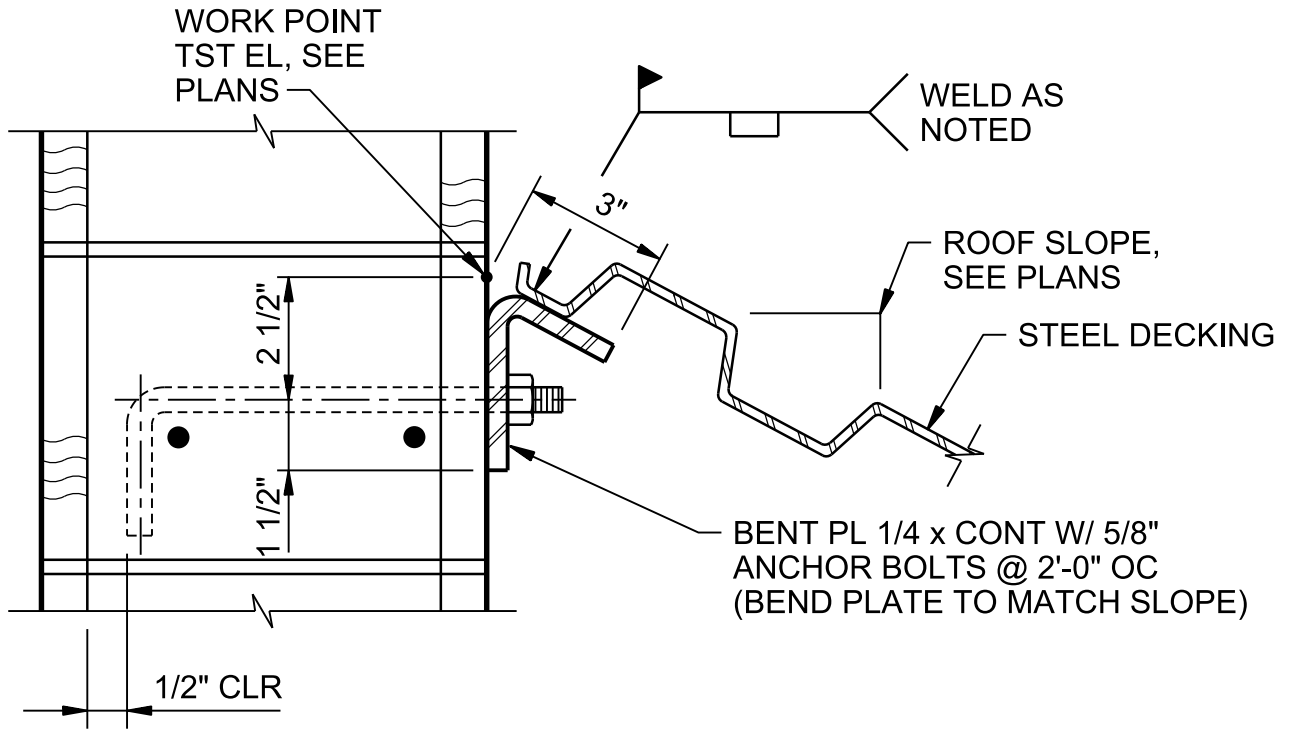
BEAM / WALL CONNECTION - ALUMINUM

NTS

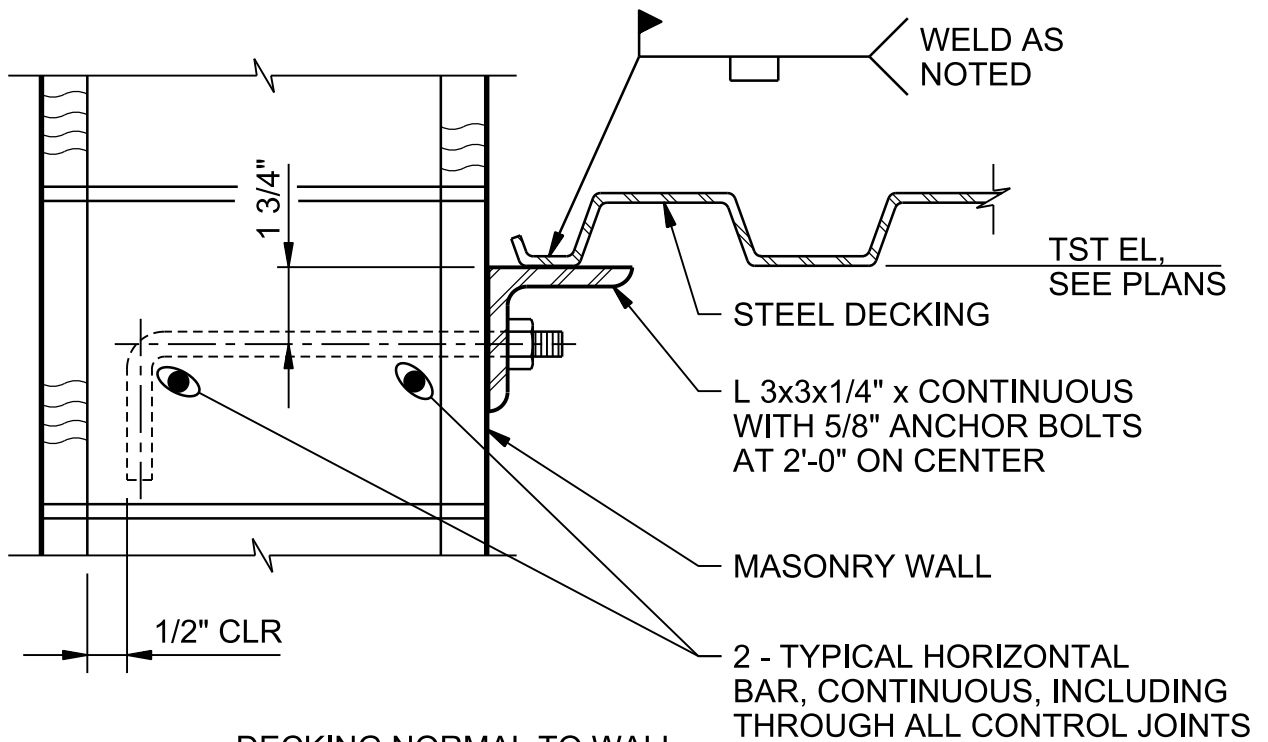
DETAIL 2 OF 2

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0514-056



DECKING AT ANGLE TO WALL



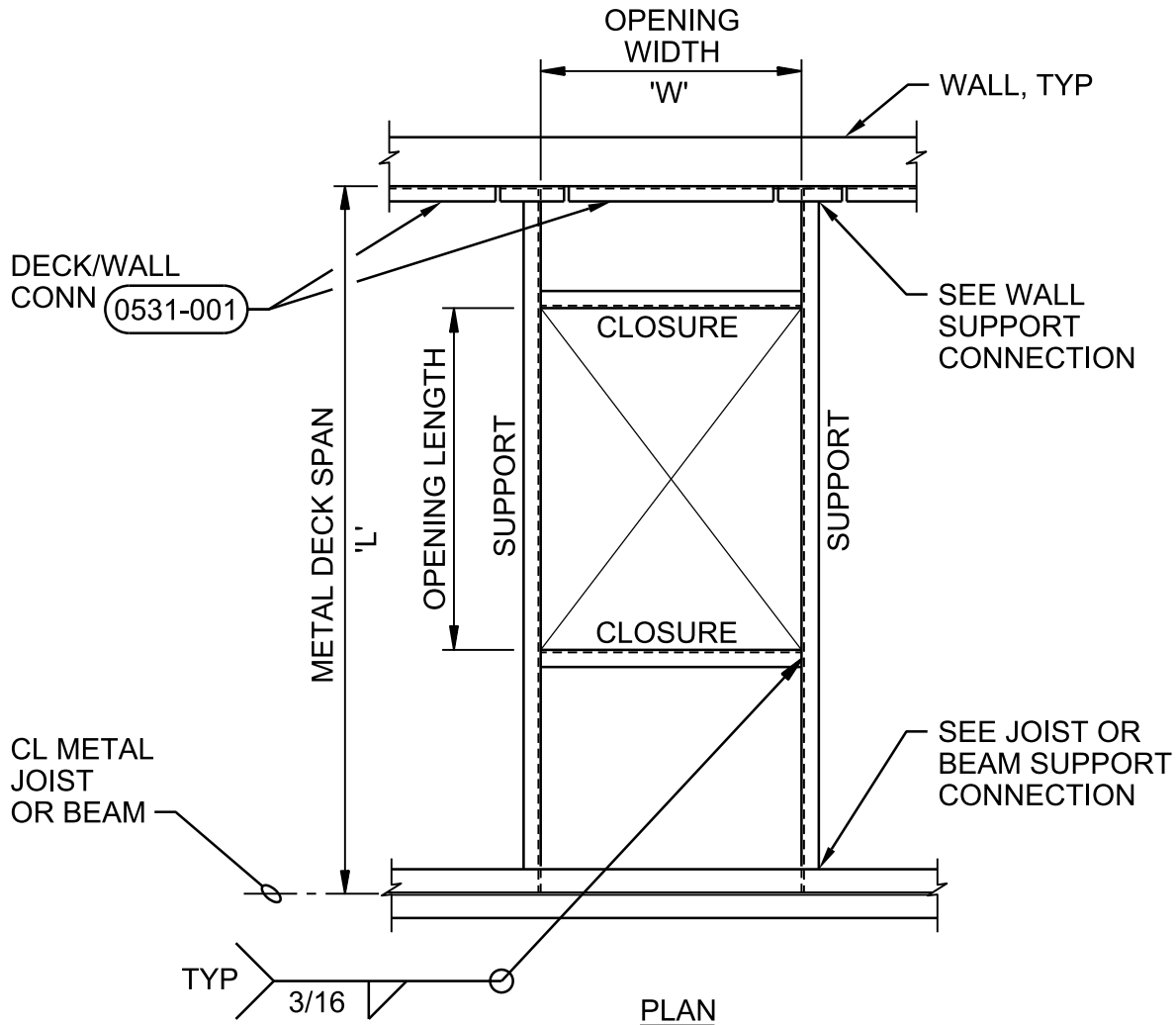
DECKING NORMAL TO WALL

DECKING LEDGER SUPPORT ANGLE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0531-001



OPENING	CLOSURE	DECK SPAN	SUPPORT
2'-0" < W ≤ 4'-0"	L 3x3x1/4	L ≤ 6'-0"	L 4x3x1/4 (LLV)
4'-0" < W ≤ 6'-0"	L 4x3x1/4 (LLV)	6'-0" < L ≤ 7'-6"	L 5x3x1/4 (LLV)
6'-0" < W	NA	7'-6" < L	NA

OPENINGS 2'-1" TO 6'-0"

NOTES:

1. ATTACH METAL DECKING TO ALL SUPPORTS PERPENDICULAR TO DECKING SPAN WITH SPECIFIED FASTENERS AT EACH VALLEY OF DECKING. ATTACH METAL DECKING TO SUPPORTS PARALLEL TO SPAN @ 6" ON CENTER. WHERE VALLEY OF DECKING DOES NOT FALL AT SUPPORTS PARALLEL TO DECK SPAN, PROVIDE FILLER PIECES FOR EQUAL ATTACHMENTS.
2. REFER TO SPECIFICATIONS FOR SMALLER DECK OPENING REINFORCEMENT.

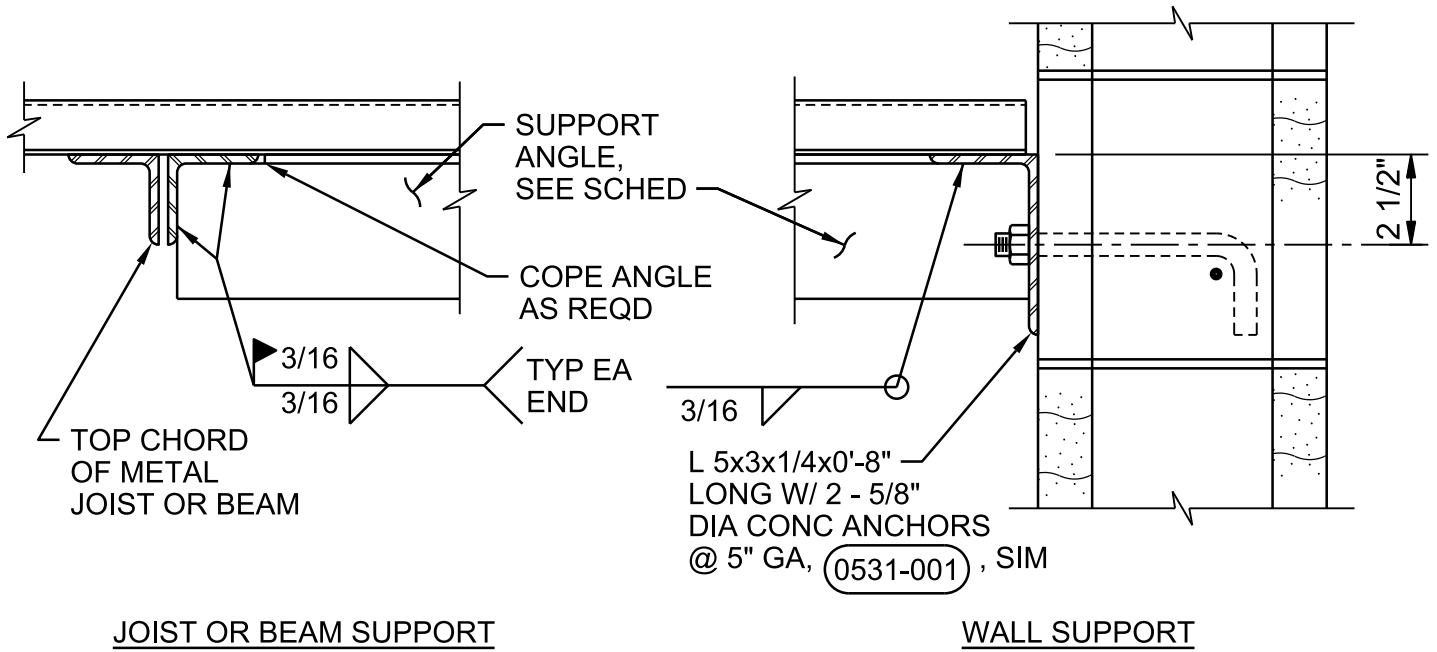
ROOF DECK OPENING

NTS

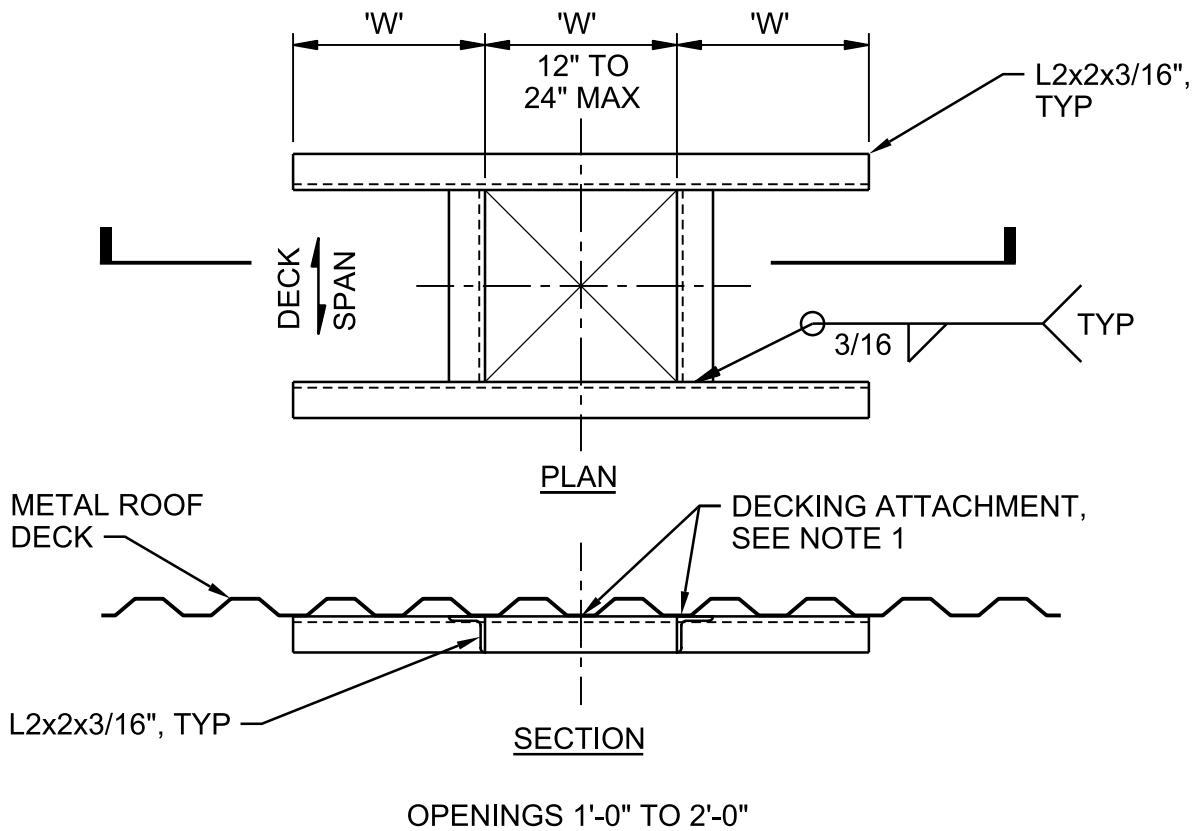
DETAIL 1 OF 2

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0531-021



FRAMING CONNECTIONS



ROOF DECK OPENING

NTS

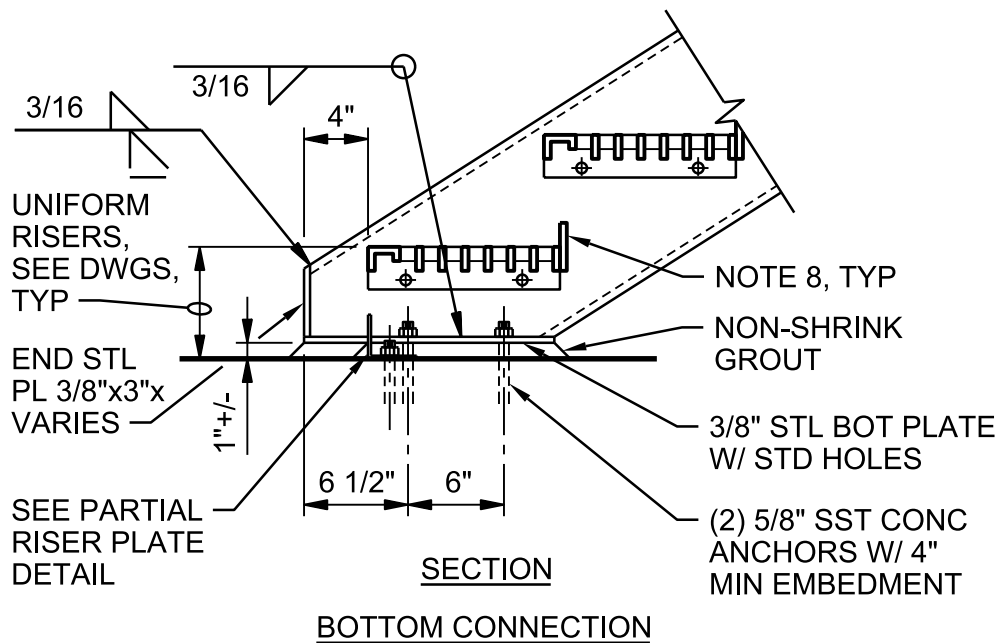
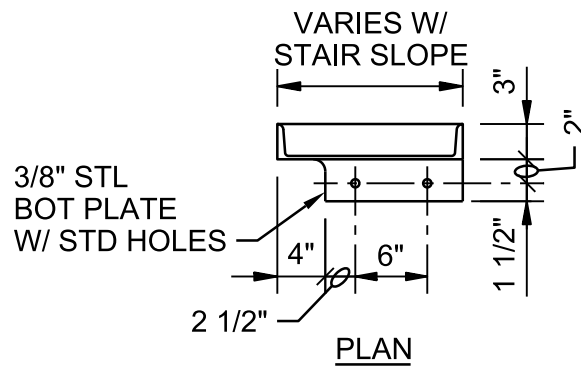
DETAIL 2 OF 2

(0531-021)

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND FOR STEEL IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
2. AMERICAN STANDARD C12x20.7 STEEL STRINGERS TYPICAL EXCEPT WHERE OTHERWISE NOTED ON PLANS.
3. GALVANIZED STEEL GRATING TREADS UNLESS OTHERWISE NOTED ON PLANS.
4. STAIR RAILING NOT SHOWN.
5. STAIR MANUFACTURER TO COORDINATE BOLTED TREADS AND RAILING CONNECTIONS.
6. FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION.
7. HOT DIP GALVANIZE ALL MEMBERS AND FASTENERS AFTER FABRICATION.
8. FOR RISER PLATE SEE PARTIAL RISER PLATE DETAIL UNLESS NOTED OTHERWISE. CLEARANCE BETWEEN TOP OF RISER PLATE AND BOTTOM OF TREAD TO BE 3 3/4" MAXIMUM. FOR STAIRS WITH PICKET RAILING EXTEND RISER PLATE PER FULL RISER PLATE DETAIL.

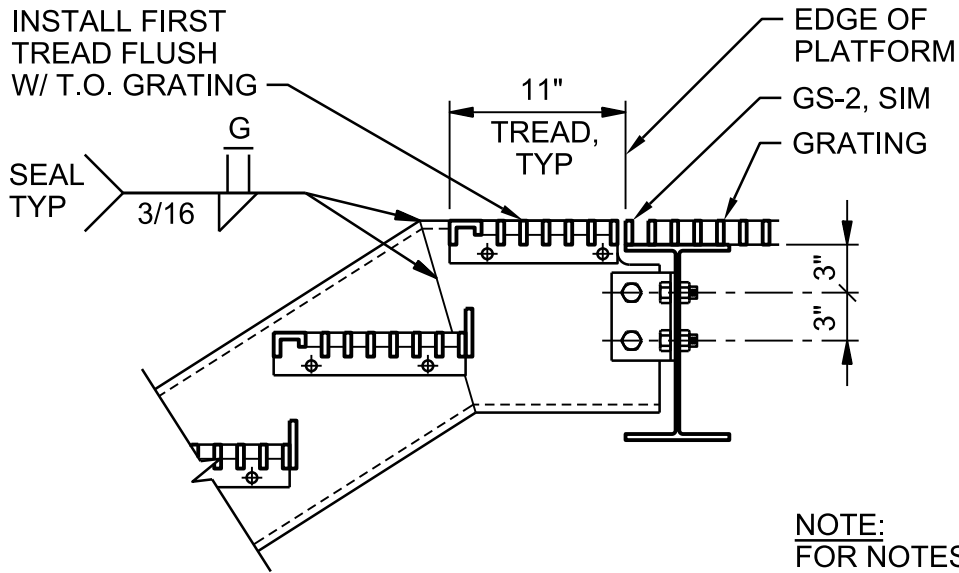
STAIR DETAILS - STEEL

NTS

DETAIL 1 OF 5

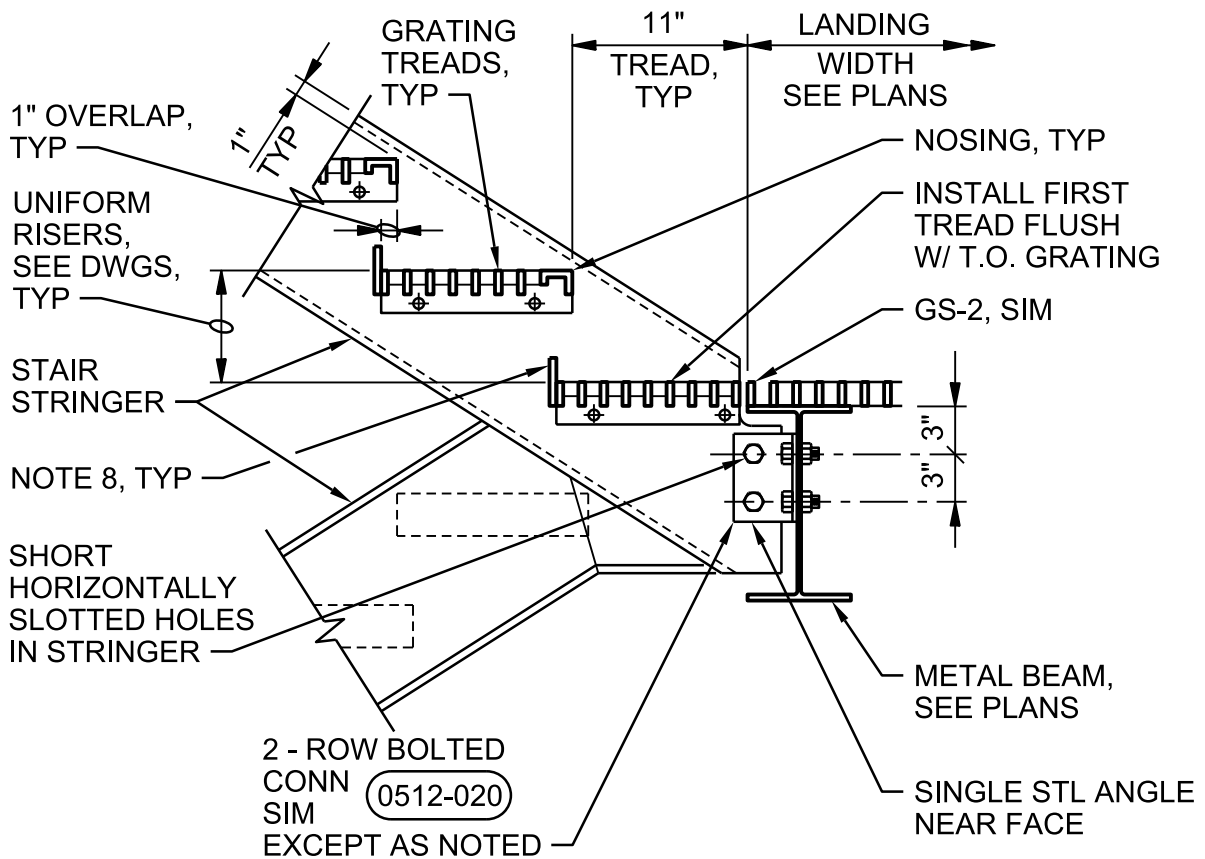
PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0551-041



TOP CONNECTION - STEEL

NOTE:
FOR NOTES NOT SHOWN
SEE LANDING CONNECTION.



LANDING CONNECTION - STEEL

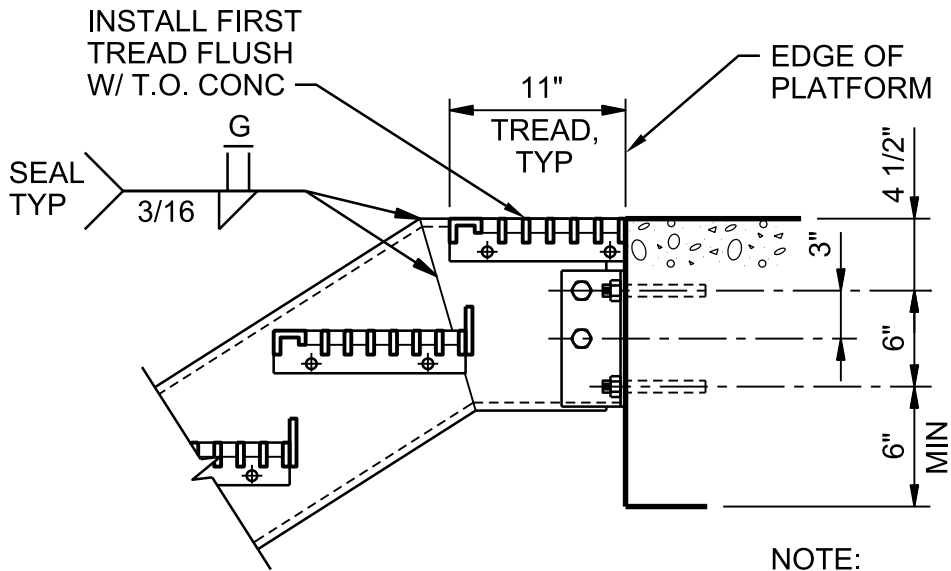
STAIR DETAILS - STEEL

NTS

DETAIL 2 OF 5

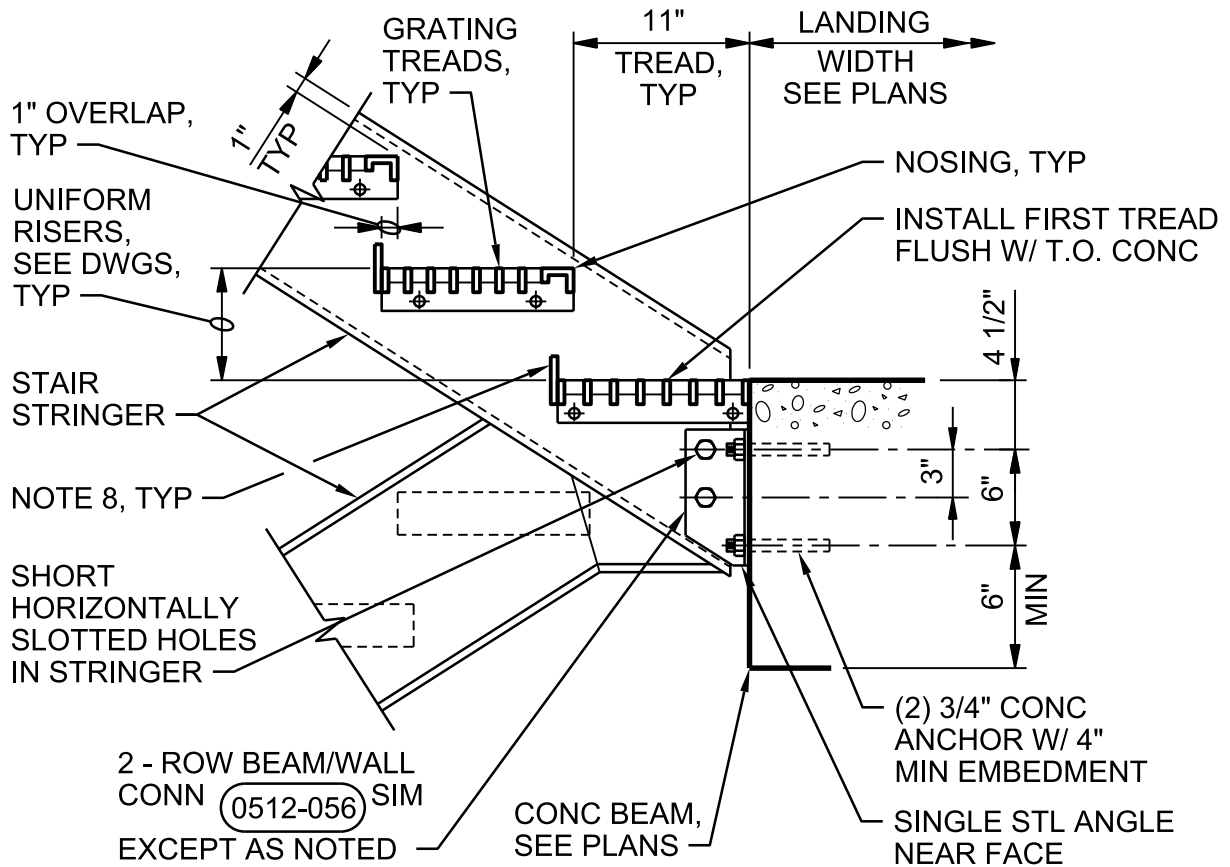
PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0551-041



TOP CONNECTION - CONCRETE

NOTE:
FOR NOTES NOT SHOWN
SEE LANDING CONNECTION.



LANDING CONNECTION - CONCRETE

STAIR DETAILS - STEEL

NTS

DETAIL 3 OF 5

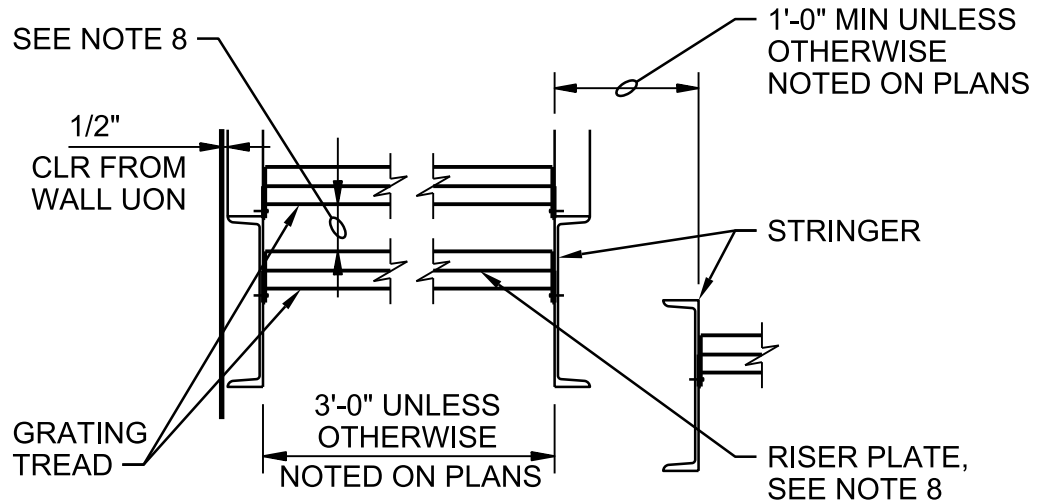
PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0551-041

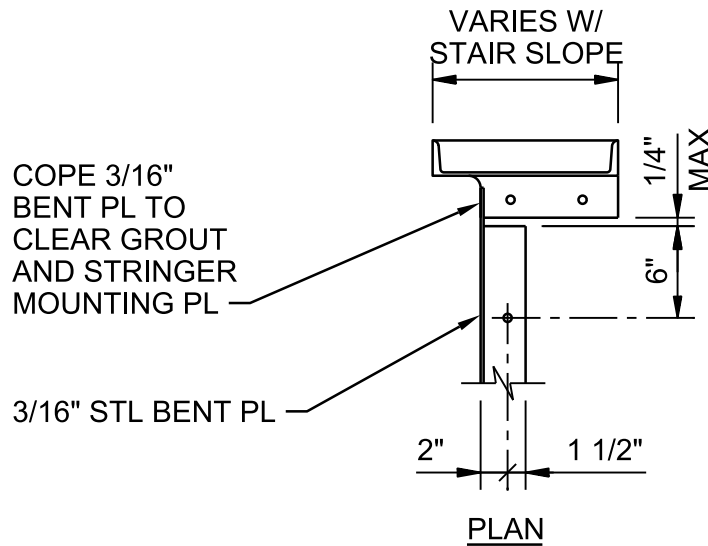
STAIRWAY WIDTH	TREAD BEARING BARS *
	STEEL TREAD
2'-3" OR LESS	3/4" x 3/16"
2'-9" OR LESS	1" x 3/16"
3'-3" OR LESS	1 1/4" x 3/16"
4'-7" OR LESS	1 1/2" x 3/16"

NOTE:

* FOR SERRATED BEARING BARS, INCREASE GRATING THICKNESS SHOWN IN TABLE BY 1/4".



STAIR TREADS



BOTTOM CLOSURE PLATE

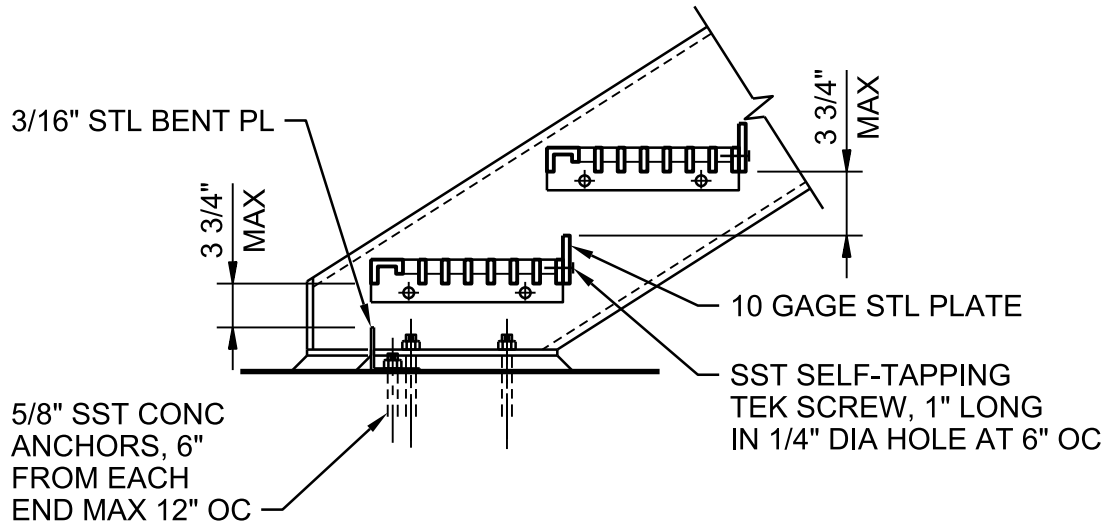
STAIR DETAILS - STEEL

NTS

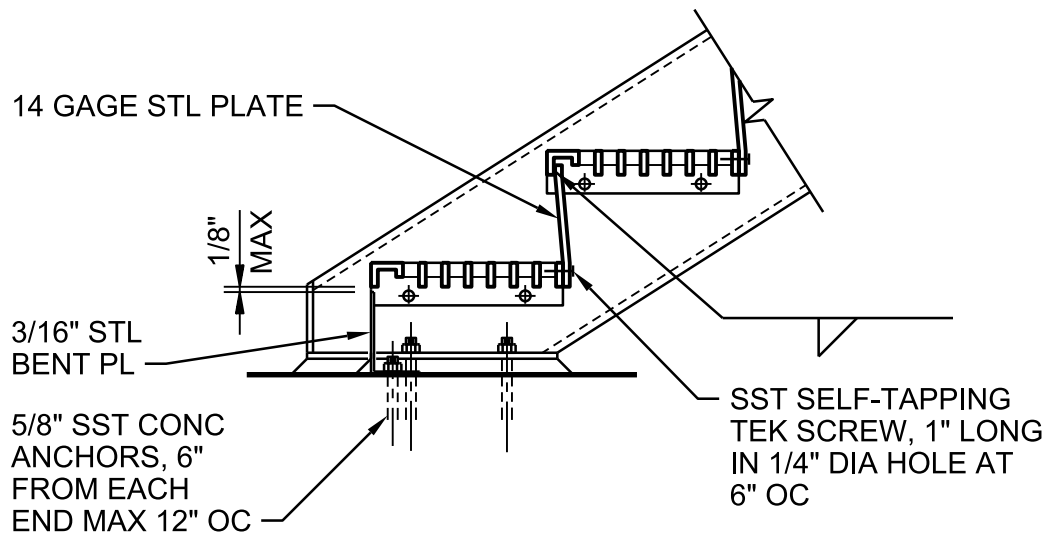
DETAIL 4 OF 5

0551-041

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON



PARTIAL RISER PLATE



FULL RISER PLATE

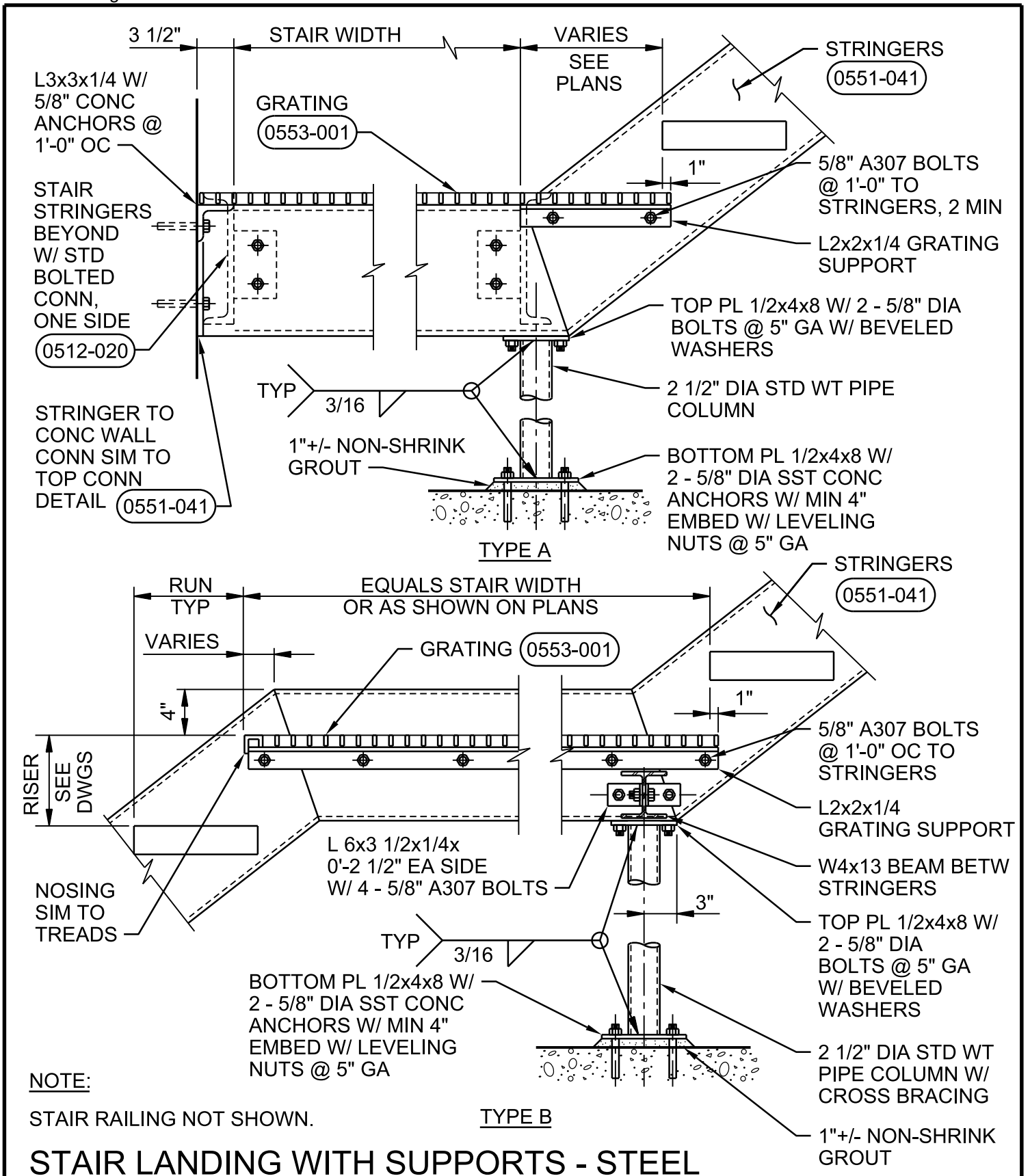
STAIR DETAILS - STEEL

NTS

DETAIL 5 OF 5

0551-041

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON



NOTE:

STAIR RAILING NOT SHOWN.

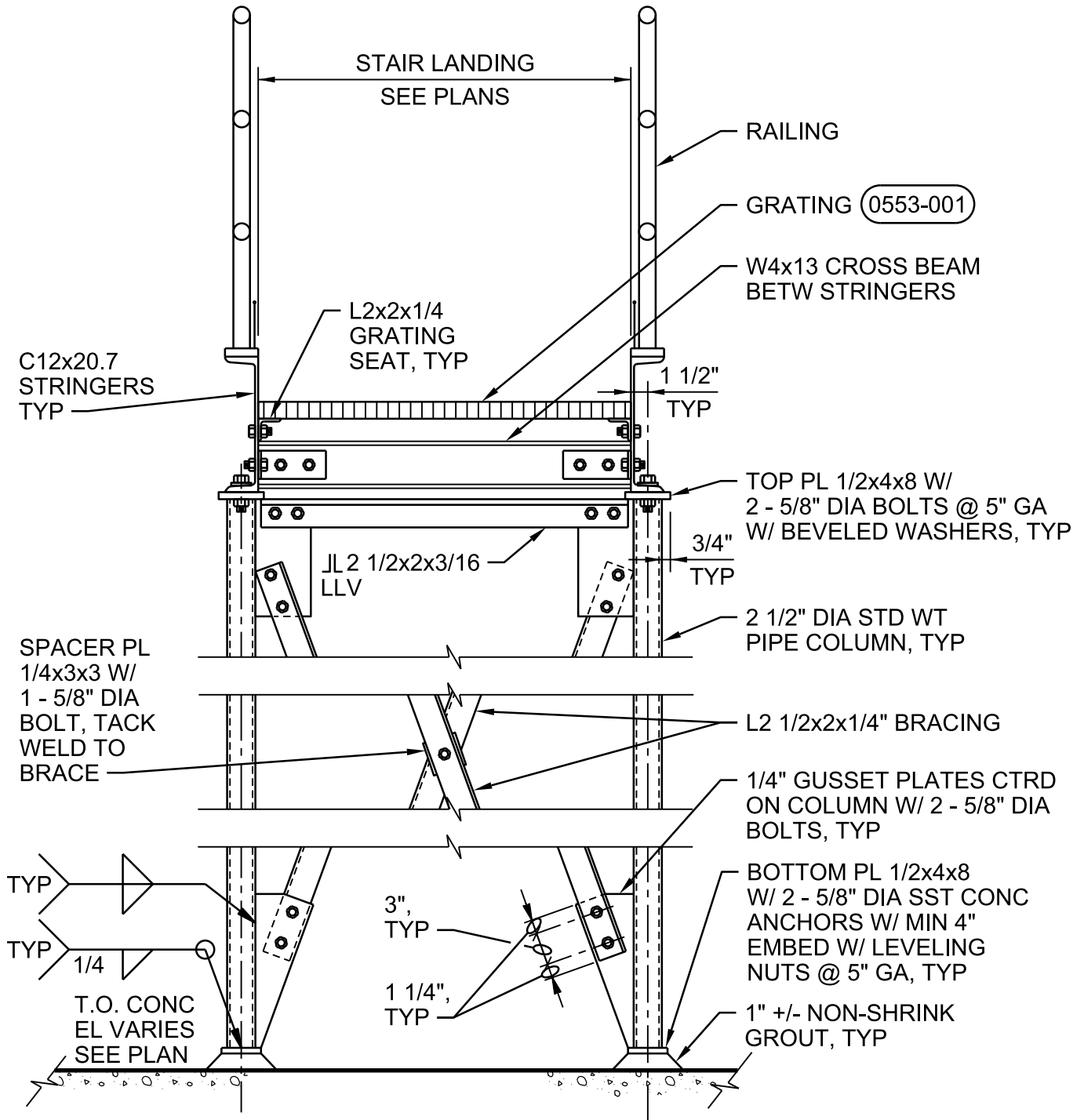
STAIR LANDING WITH SUPPORTS - STEEL

NTS

DETAIL 1 OF 3

0551-042

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON



NOTES:

1. HOT-DIP GALV STEEL LANDING, SUPPORTS AND CONNECTIONS AFTER FABRICATION.
2. USE A SINGLE BAY OF CROSS BRACING WHEN THE LENGTH OF THE PIPE COLUMN IS EQUAL TO OR LESS THAN TWICE THE CL-TO-CL WIDTH BETWEEN COLUMNS.

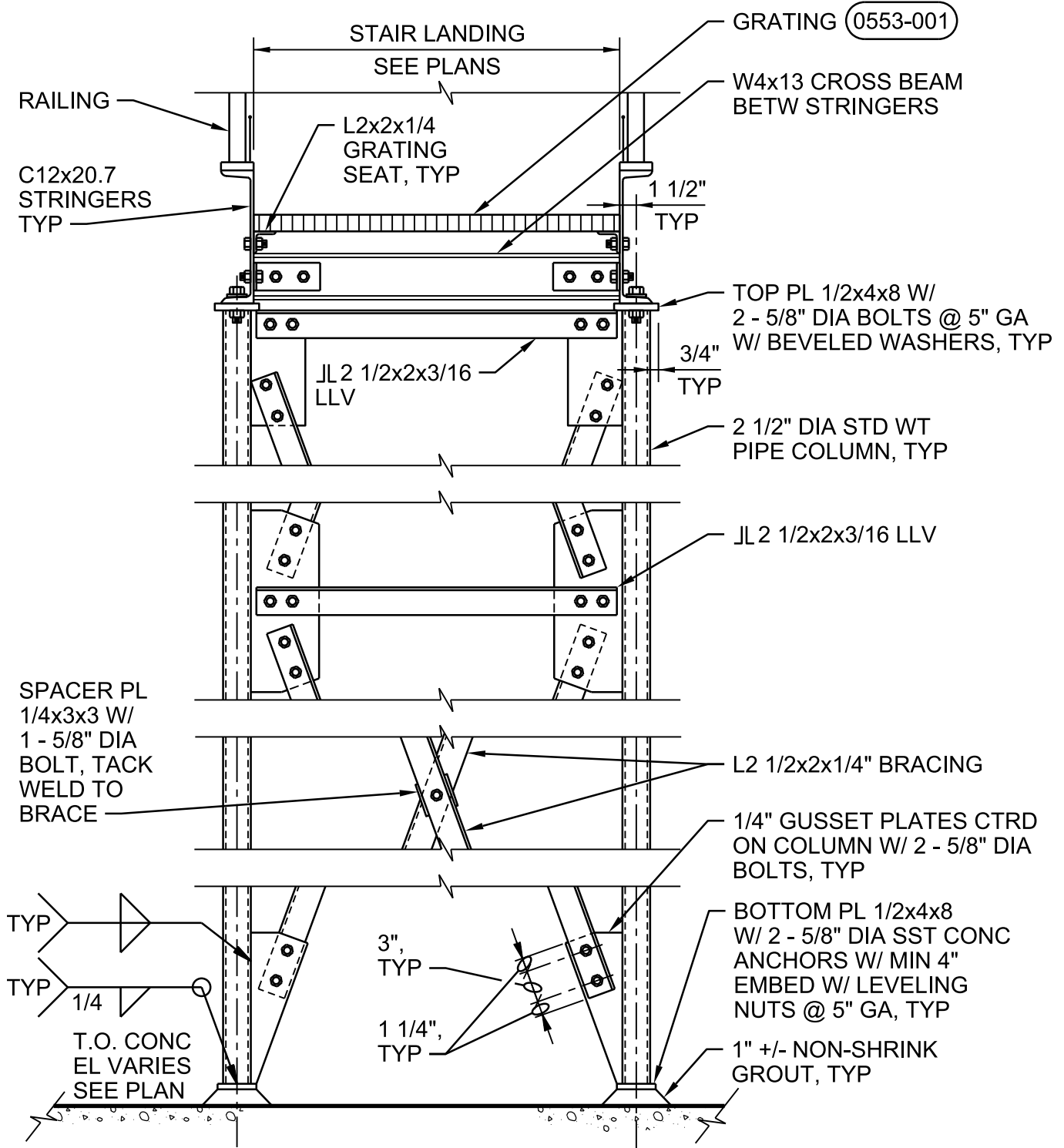
STAIR LANDING WITH SUPPORTS - STEEL

NTS

DETAIL 2 OF 3

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0551-042



NOTES:

1. HOT-DIP GALV STEEL LANDING, SUPPORTS AND CONNECTIONS AFTER FABRICATION.
2. USE A DOUBLE BAY OF CROSS BRACING WHEN THE LENGTH OF THE PIPE COLUMN IS GREATER THAN TWICE THE CL-TO-CL WIDTH BETWEEN COLUMNS.

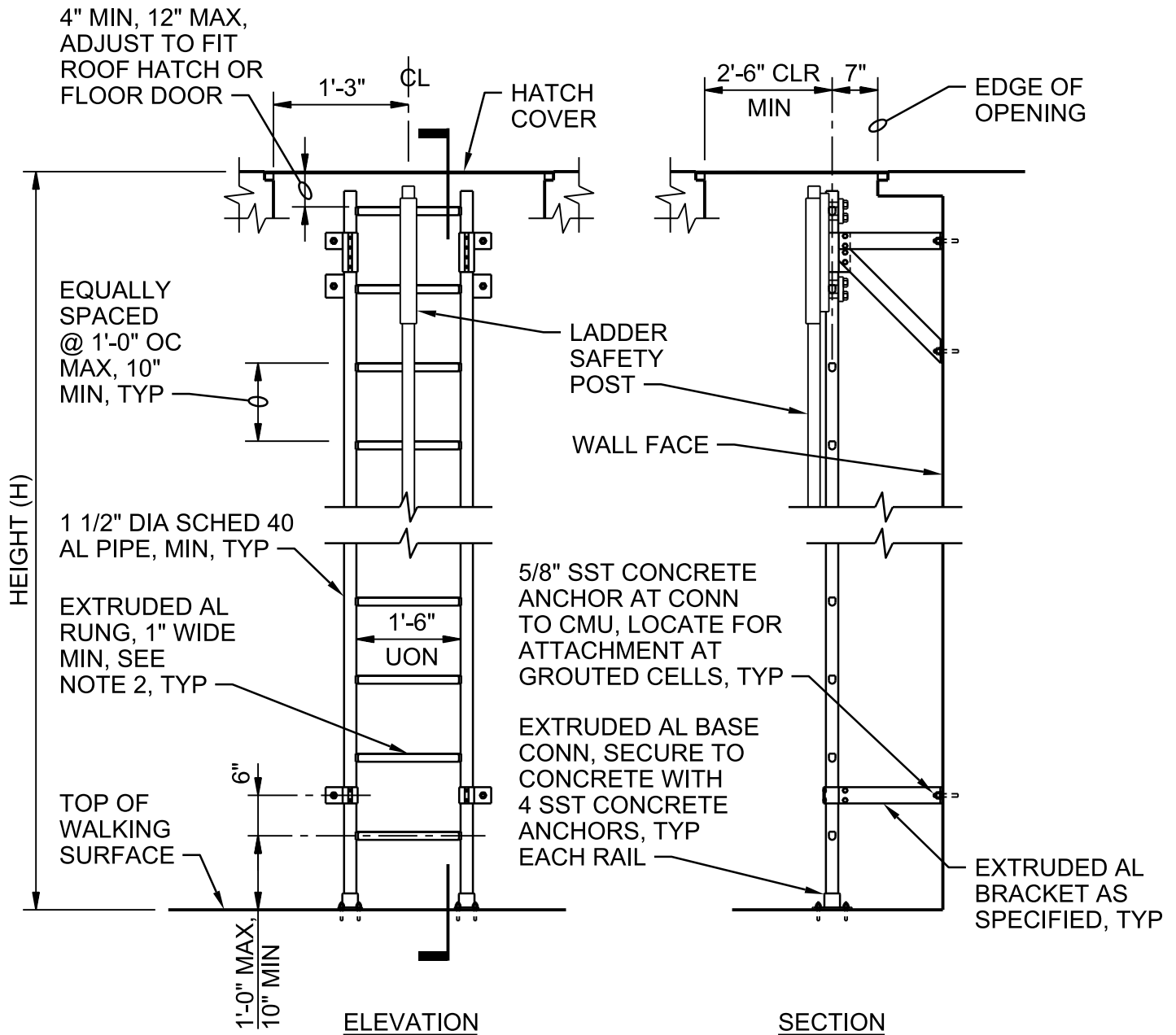
STAIR LANDING WITH SUPPORTS - STEEL

NTS

DETAIL 3 OF 3

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0551-042



NOTES:

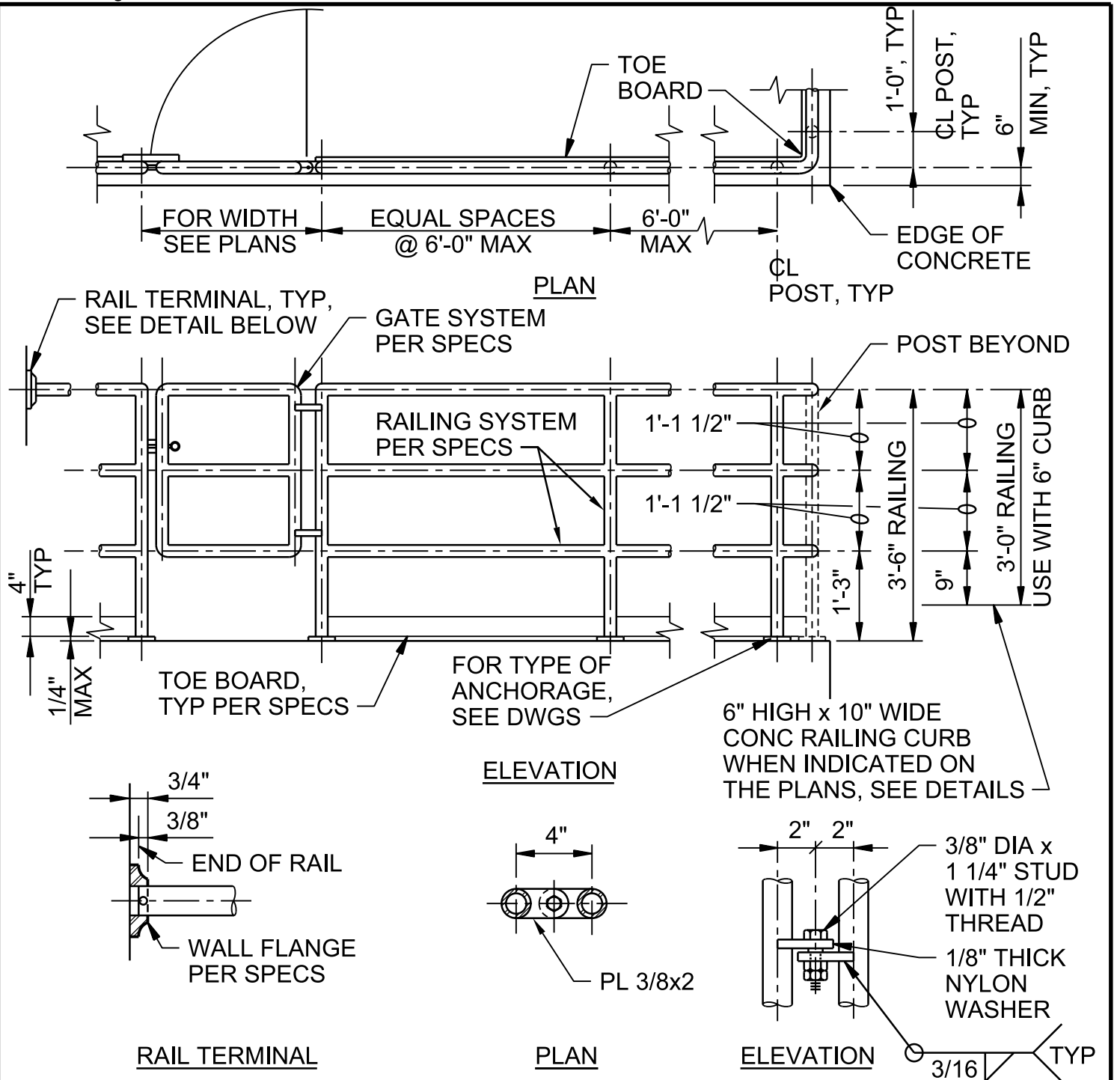
1. PROVIDE PROTECTION FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
2. PROVIDE CORRUGATED, KNURLED OR DIMPLED SURFACE ON TOP OF RUNG.

**LADDER - ALUMINUM - PRE-ENGINEERED
PIPE UNDER COVER - TYPE 'D'**

NTS (H ≤ 24'-0")

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0551-101



NOTES:

1. FASTEN RAIL TO WALL FLANGE PER MANUFACTURER'S RECOMMENDATIONS.
2. WALL FLANGE TO BE MOUNTED TO WALL WITH (2) 3/8" DIA SST WEDGE ANCHORS.
3. AT CONTRACTOR'S OPTION FABRICATE HINGES OR PROVIDE OTHER HINGES PER SPECIFICATIONS. ANODIZE FINISH AFTER ALL WELDING PER SPECIFICATIONS.

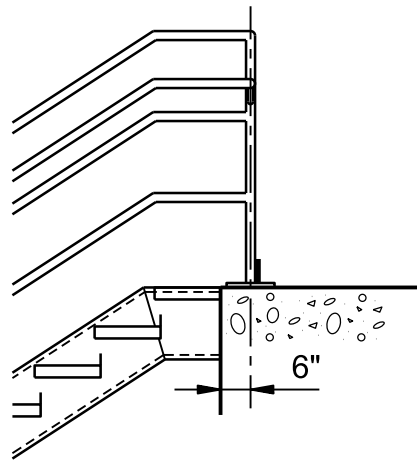
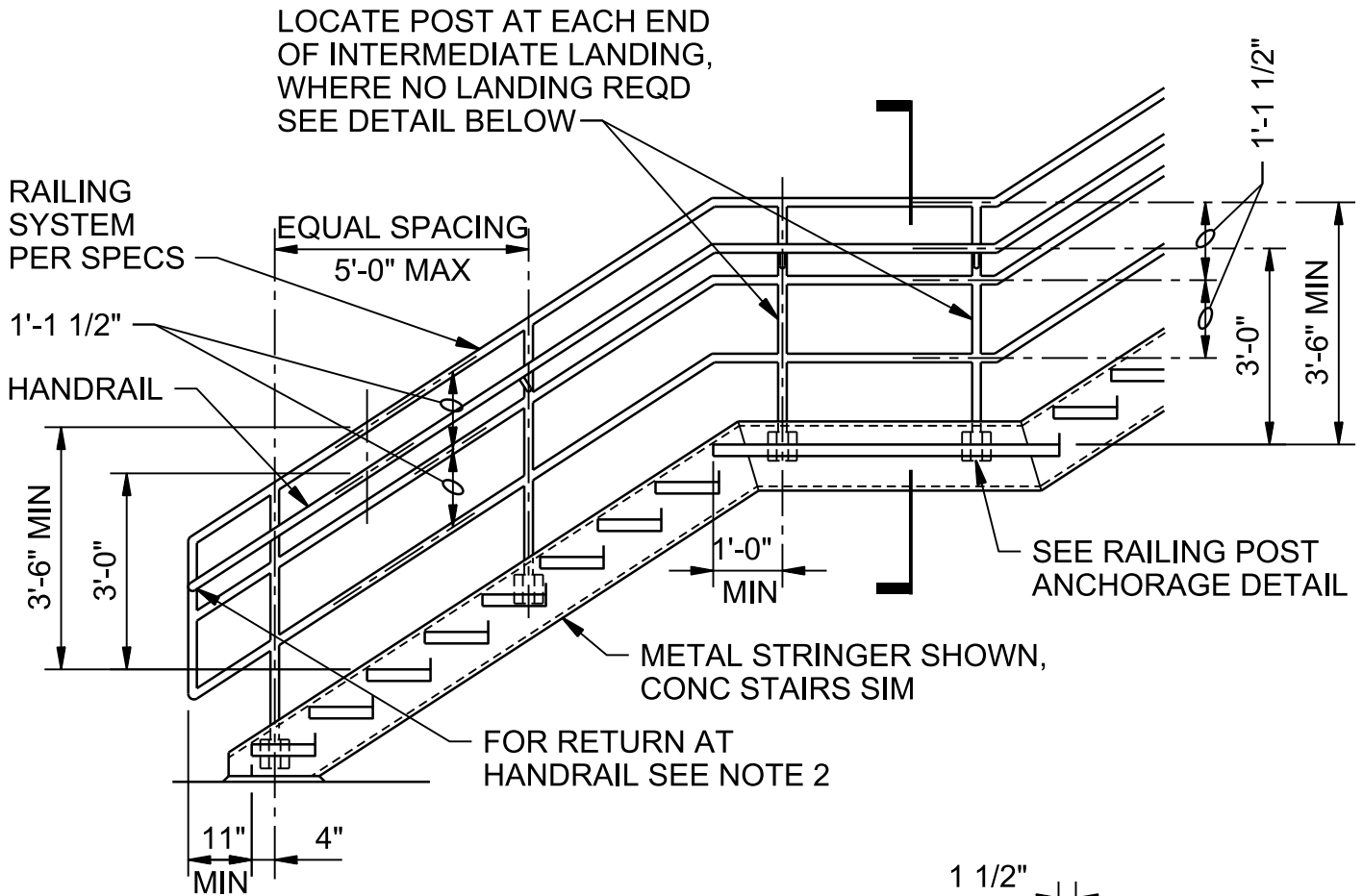
RAILING - 3 RAIL - ALUMINUM

NTS

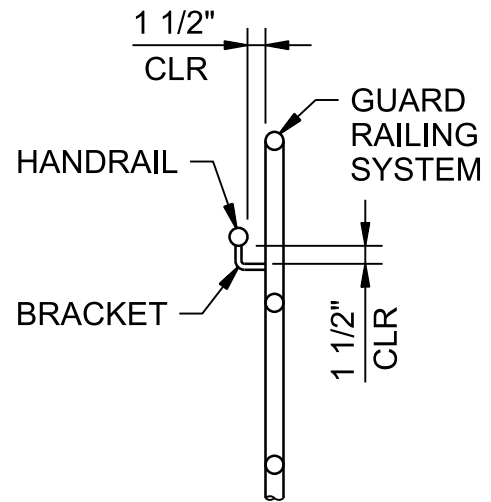
DETAIL 1 OF 5

0552-001

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON



RAILING DETAIL WITHOUT LANDING



RAILING SECTION

NOTES:

1. PROVIDE TOE BOARD AT LANDING WHERE REQUIRED.
2. RETURN ENDS OF HANDRAIL TO GUARD AT BOTH ENDS.

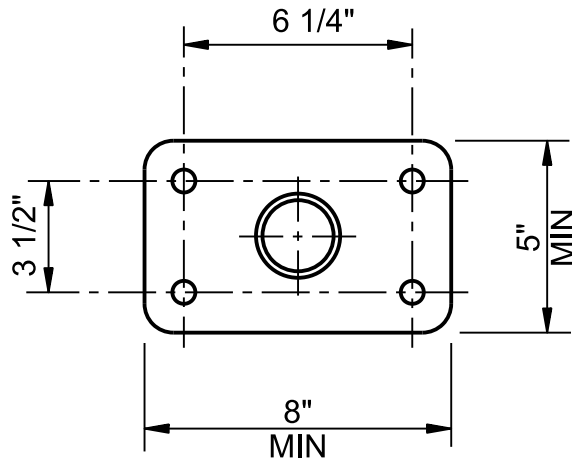
RAILING - 3 RAIL STAIR - ALUMINUM (IBC)

NTS

DETAIL 2 OF 5

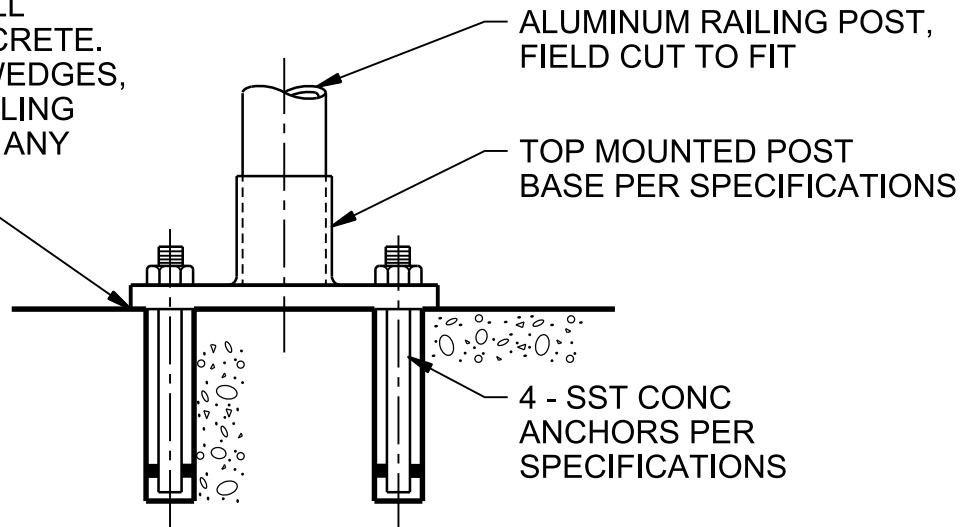
0552-001

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON



PLAN

THE BASEPLATE SHALL SIT SOLIDLY ON CONCRETE. THE USE OF SHIMS, WEDGES, GROUT, ETC FOR RAILING POST ALIGNMENT OR ANY OTHER REASON WILL NOT BE PERMITTED



ELEVATION

TYPE 'A'

NOTE:

PROVIDE PROTECTION FOR DISSIMILAR METALS AND FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.

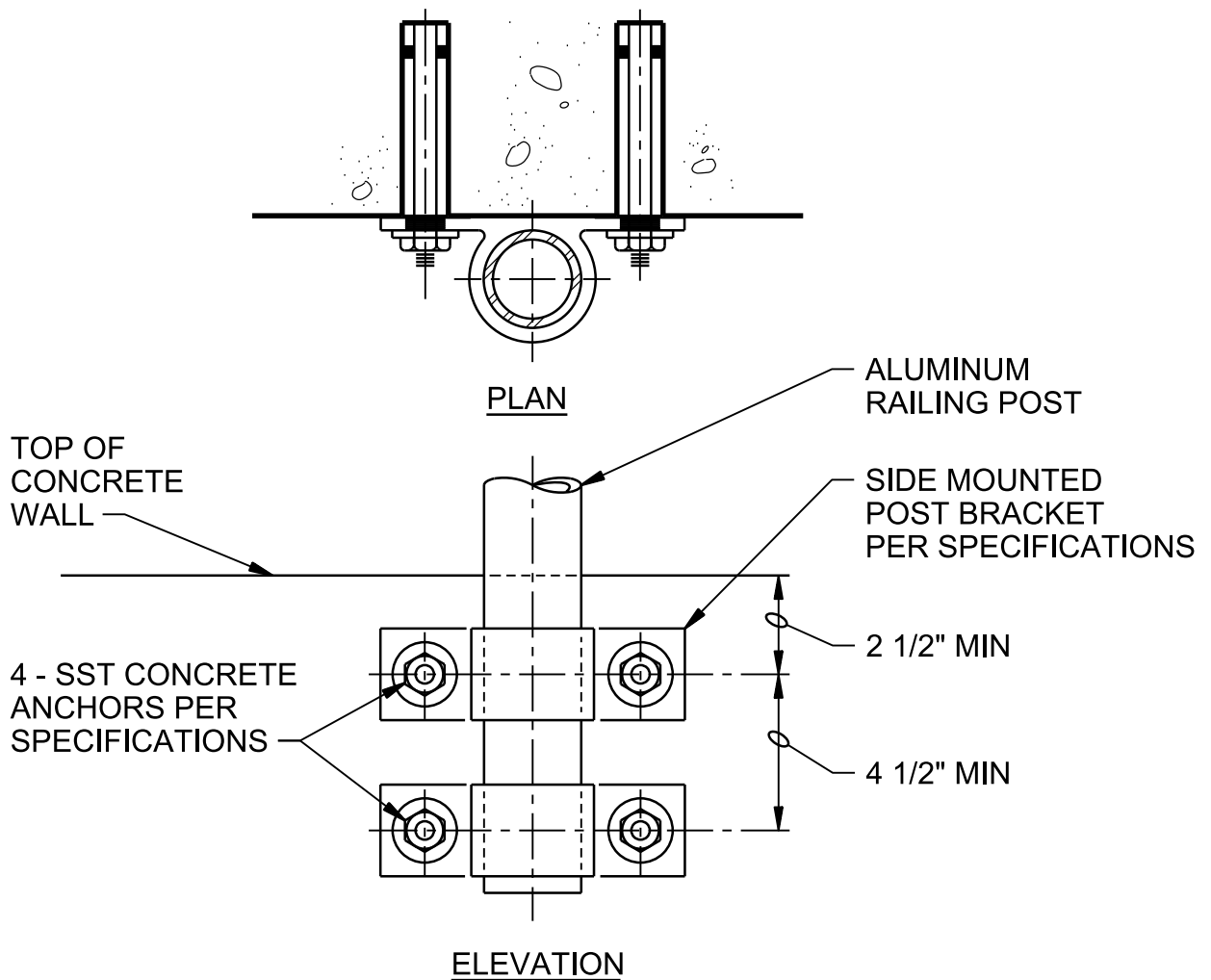
RAILING POST ANCHORAGE TYPE 'A' - ALUMINUM

NTS

DETAIL 3 OF 5

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0552-001



ELEVATION

TYPE 'B'

NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
2. USE SIDE MOUNTED POST BRACKET AS A TEMPLATE FOR THE ANCHOR BOLTS.

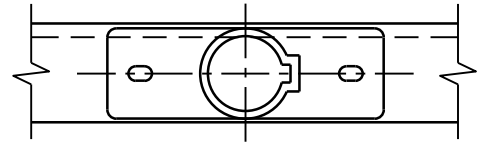
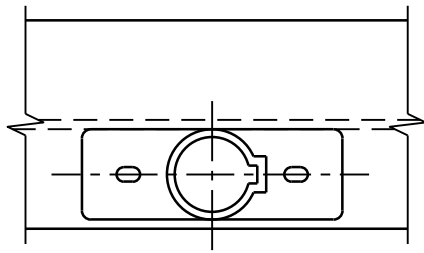
RAILING POST ANCHORAGE TYPE 'B' - ALUMINUM

NTS

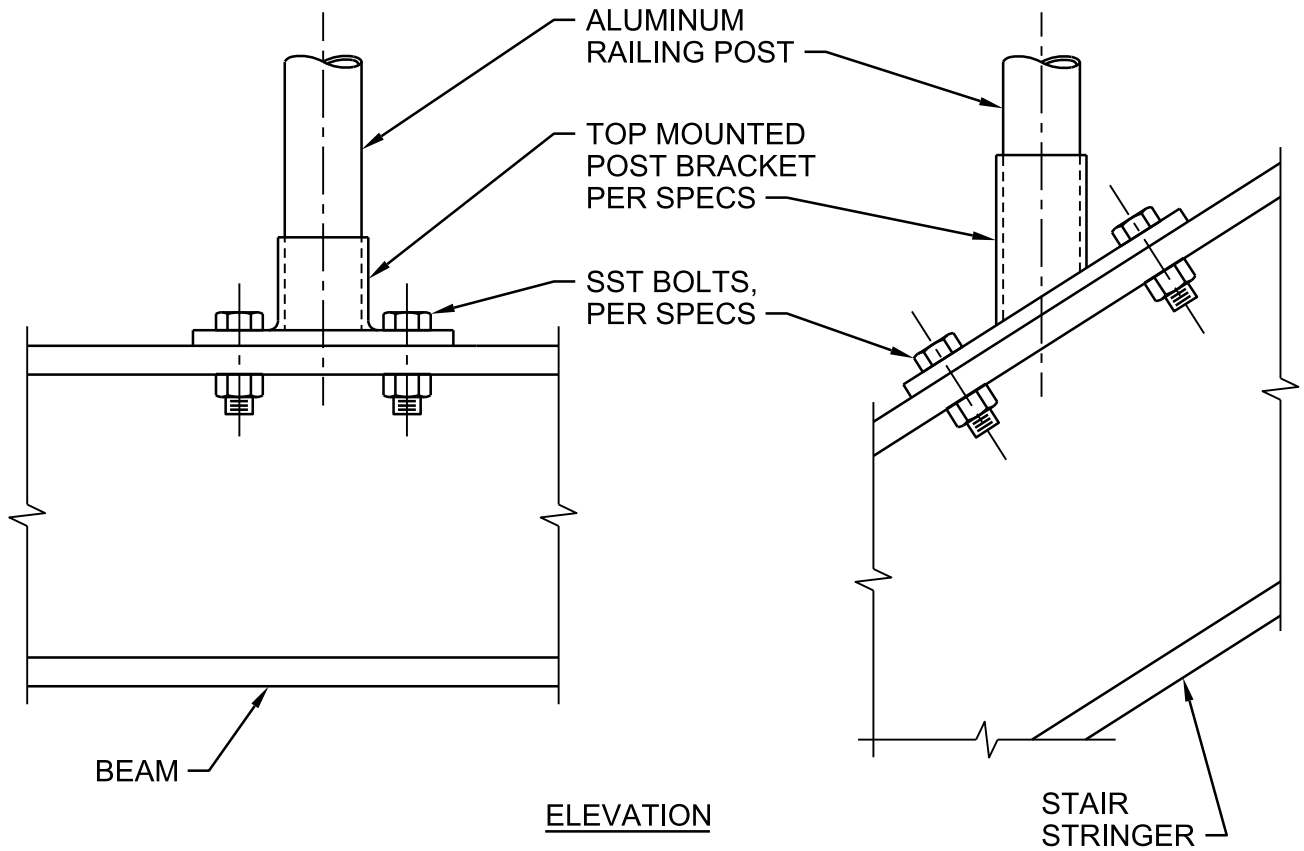
DETAIL 4 OF 5

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0552-001



PLAN



ELEVATION

TYPE 'C'

NOTE:

PROVIDE PROTECTION FOR DISSIMILAR METALS PER SPECIFICATIONS.

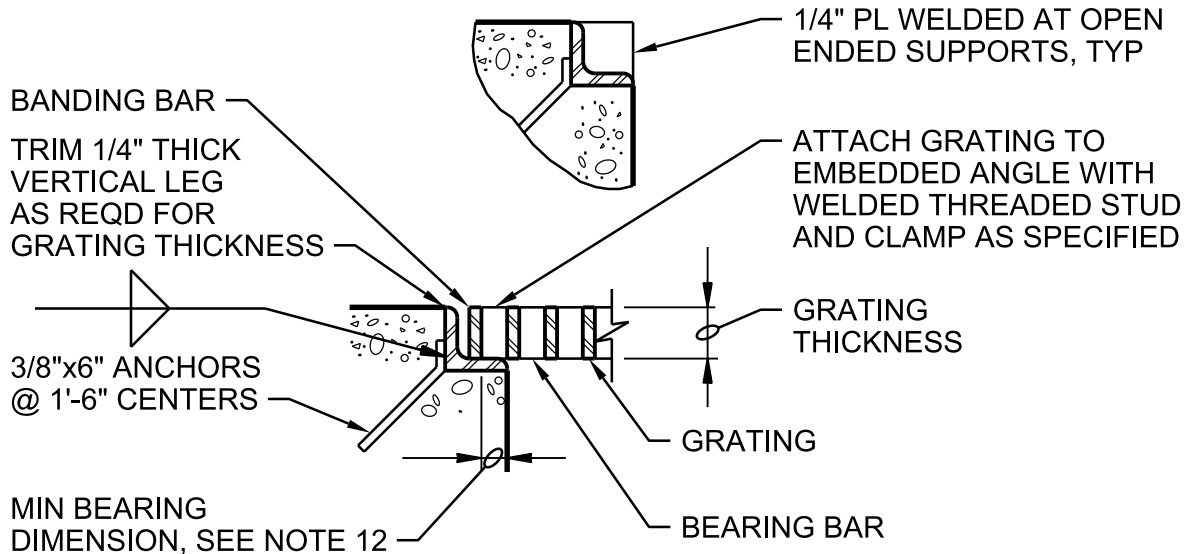
RAILING POST ANCHORAGE TYPE 'C' - ALUMINUM

NTS

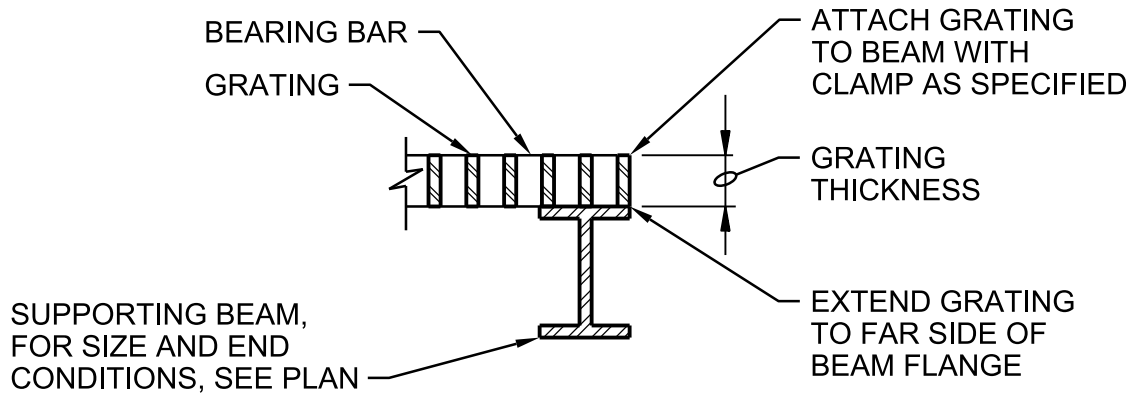
DETAIL 5 OF 5

0552-001

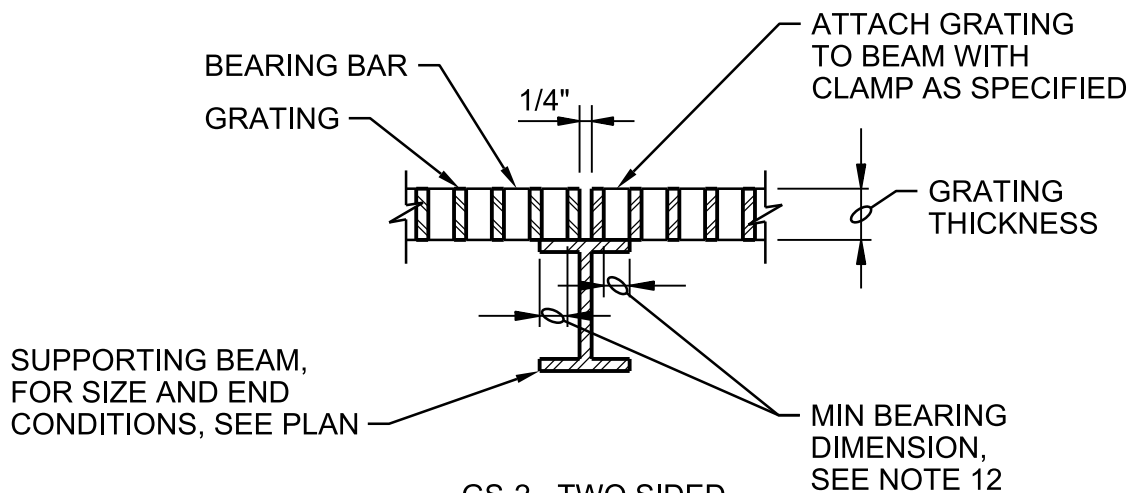
PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON



GS-1



GS-2 - ONE SIDED



GS-2 - TWO SIDED

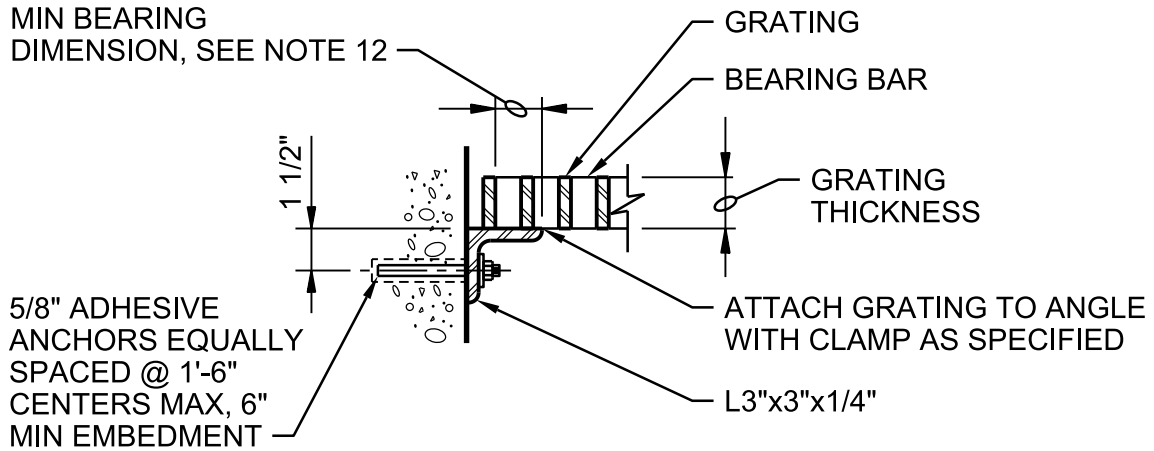
STANDARD GRATING

NTS

DETAIL 1 OF 4

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

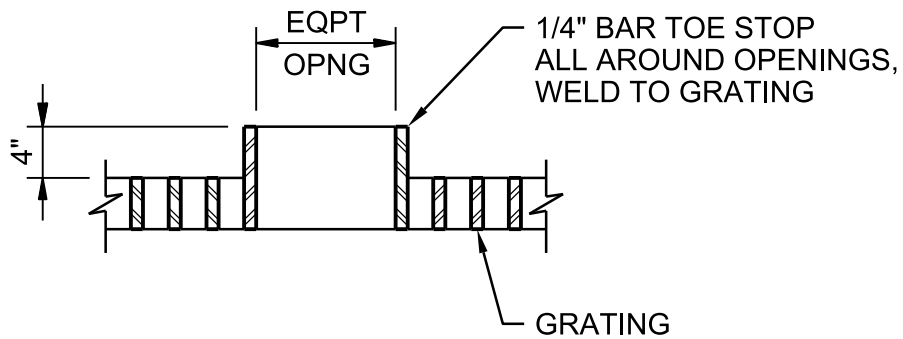
0553-001



NOTES:

1. USE GS-3 ONLY FOR LIGHT DUTY GRATING, TYPE 'A'.
2. INSTALL ANCHORS MAXIMUM 4" FROM EACH END.
3. WHEN ANCHOR IS WITHIN 4" OF A CONCRETE EDGE, UTILIZE MANUFACTURER'S LOW-TORQUE INSTALLATION PROCEDURES.

GS-3



EQUIPMENT OPENINGS

STANDARD GRATING


NTS

DETAIL 2 OF 4

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0553-001

GENERAL NOTES:

1. GRATING SHALL BE LIGHT DUTY GRATING UNLESS OTHERWISE NOTED ON DRAWINGS.
2. GRATING SPAN IS INDICATED BY  , SEE PLAN.
3. INDIVIDUAL GRATING SECTIONS SHALL NOT EXCEED 3'-0" IN WIDTH OR WEIGH MORE THAN 150 POUNDS, UNLESS INDICATED OTHERWISE, FOR TYPES 'A' & 'B' GRATING. TYPE 'C' GRATING SHALL HAVE A MINIMUM WIDTH OF 2'-0" REGARDLESS OF WEIGHT.
4. SHOP DRAWINGS BASED ON FIELD DIMENSIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION.
5. MATERIAL FOR SUPPORTS OF STEEL AND ALUMINUM GRATING TO BE SAME AS GRATING, EXCEPT METAL SUPPORTS THAT ARE TO BE EMBEDDED IN CONCRETE SHALL BE TYPE 316 STAINLESS STEEL.
6. UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS TABULATED IN "GRATING THICKNESS TABLE" FOR APPLICABLE GRATING TYPE.
7. FOR SERRATED BEARING BARS, INCREASE GRATING THICKNESSES SHOWN IN TABLES BY 1/4".
8. BEARING BAR THICKNESS FOR GRATING TO BE 3/16" MINIMUM. SEE SPECIFICATIONS FOR SPACING OF BEARING AND CROSS BARS.
9. BAND ALL EDGES. MATCH DEPTH OF BEARING BAR.
10. TYPE OF MATERIAL USED SHALL BE AS SHOWN ON PLANS OR AS SPECIFIED. THIS STANDARD DETAIL INCLUDES 2 TYPES, ALTHOUGH BOTH MAY NOT BE INCLUDED IN PROJECT.
11. THE HORIZONTAL CLEARANCE BETWEEN THE GRATING AND GRATING SUPPORTS SHALL NOT BE LESS THAN 1/4" NOR GREATER THAN 1/2" AND AS SPECIFIED.
12. MINIMUM BEARING HORIZONTAL DIMENSION = 1" FOR GRATING DEPTH 2 1/4" OR LESS. MINIMUM BEARING HORIZONTAL DIMENSION = 2" FOR GRATING DEPTH GREATER THAN 2 1/4".

STANDARD GRATING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

DETAIL 3 OF 4

0553-001

LIGHT DUTY GRATINGTYPE 'A'
(100 PSF)

GRATING THICKNESS TABLE

MAXIMUM SPAN	STEEL	ALUMINUM
3'-6"	1"	1 1/4"
4'-0"	1"	1 1/2"
4'-6"	1"	1 3/4"
5'-0"	1 1/4"	1 3/4"
5'-6"	1 1/4"	2"
6'-0"	1 1/2"	2 1/4"
6'-6"	1 1/2"	2 1/4"
7'-0"	1 3/4"	2 1/2"

MEDIUM DUTY GRATINGTYPE 'B'
(500 PSF)

GRATING THICKNESS TABLE

MAXIMUM SPAN	STEEL	ALUMINUM
< 2'-0"	1"	1"
2'-6"	1"	1 1/4"
3'-0"	1 1/4"	1 1/2"
3'-6"	1 1/4"	1 3/4"
4'-0"	1 1/2"	2"
4'-6"	1 3/4"	2 1/4"
5'-0"	1 3/4"	2 1/2"
5'-6"	2"	DO NOT USE ALUMINUM GRATING
6'-0"	2 1/4"	
6'-6"	2 1/2"	

HEAVY DUTY GRATINGTYPE 'C'
(H 20 WHEEL LOAD)

GRATING THICKNESS TABLE

MAXIMUM SPAN	STEEL	ALUMINUM
1'-0"	2"x3/16"	DO NOT USE ALUMINUM GRATING
1'-8"	2 1/2"x1/4"	
2'-0"	2 1/2"x3/8" OR 3"x1/4"	
2'-6"	3"x3/8" OR 4"x1/4"	
3'-3"	3 1/2"x3/8"	
4'-0"	4"x3/8"	
5'-0"	4 1/2"x3/8"	

STANDARD GRATING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

DETAIL 4 OF 4

0553-001

EXTEND PLATES TO
CLOSE OPENING ABOVE
BEAM WHERE WALL IS
CONTINUOUS

FABRICATE CLOSURE
PLATE W/ MAX 3/16"
GAP AROUND BEAM

TOP OF WALL

4"
SEE NOTE

FILL WALL
BLOCKOUT
W/ FIRE SAFING

EDGE OF
BLOCKOUT FOR
BEAM SEAT,
SEE (0512-067)

20 GA GALV STL CLOSURE
PLATES EA FACE OF WALL
BLOCKOUT, ATTACH TO
WALL W/ 1/4" DIA SST
SLEEVE ANCHORS
AT 6" MAX SPACING

1"
3"
TYP
SIDES
& BOT

NOTE:

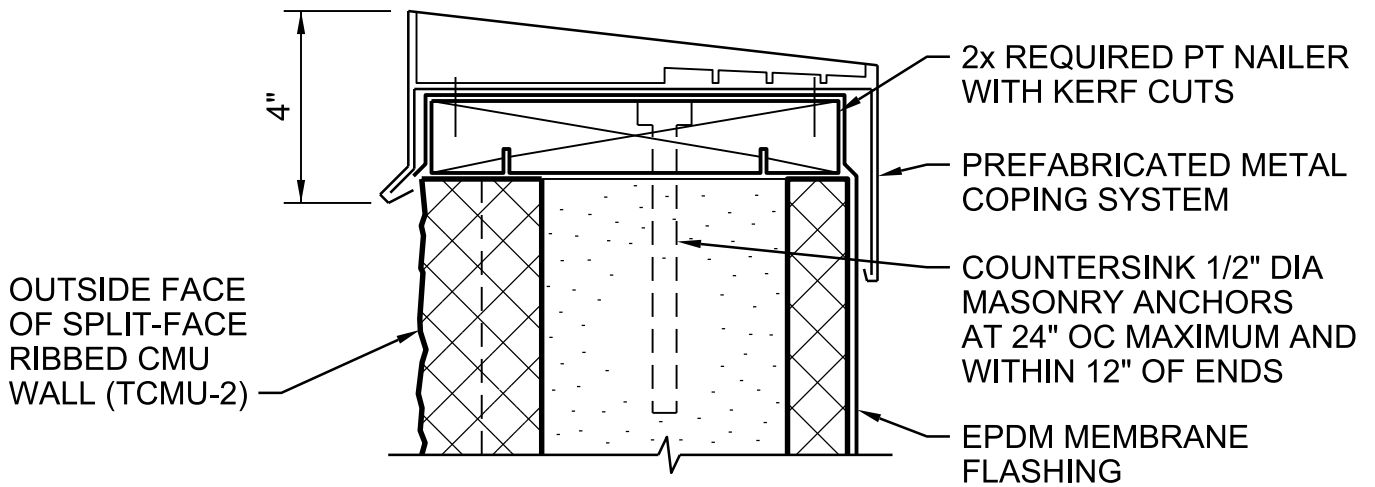
FOR DETAIL (0512-067) CLOSURES, LOCATE ANCHORS SO THEY DO NOT CONFLICT WITH LEDGER ANGLE.

BEAM SEAT CLOSURE PLATE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0558-002

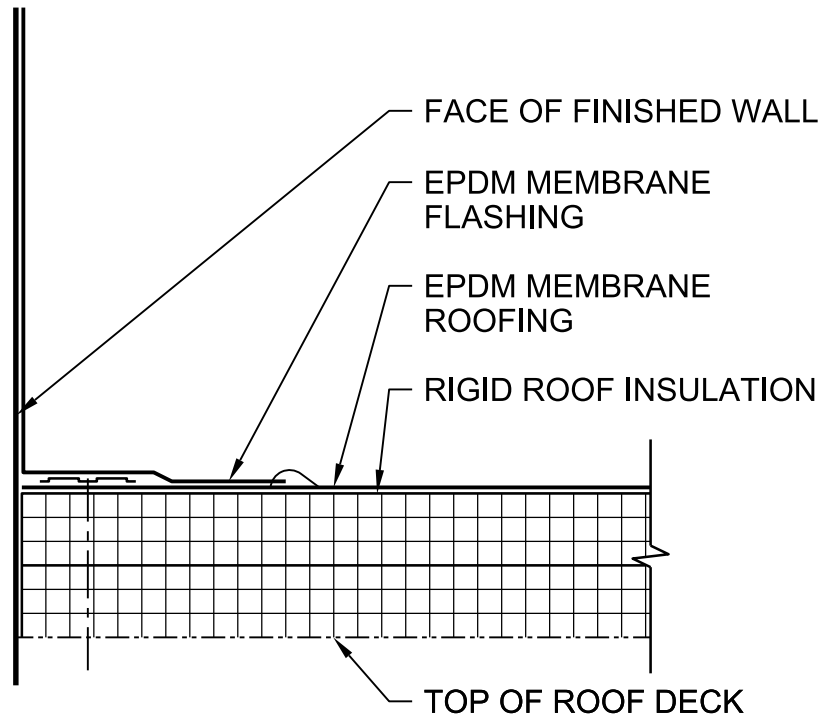


COPING (MASONRY WALL)

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0753-002

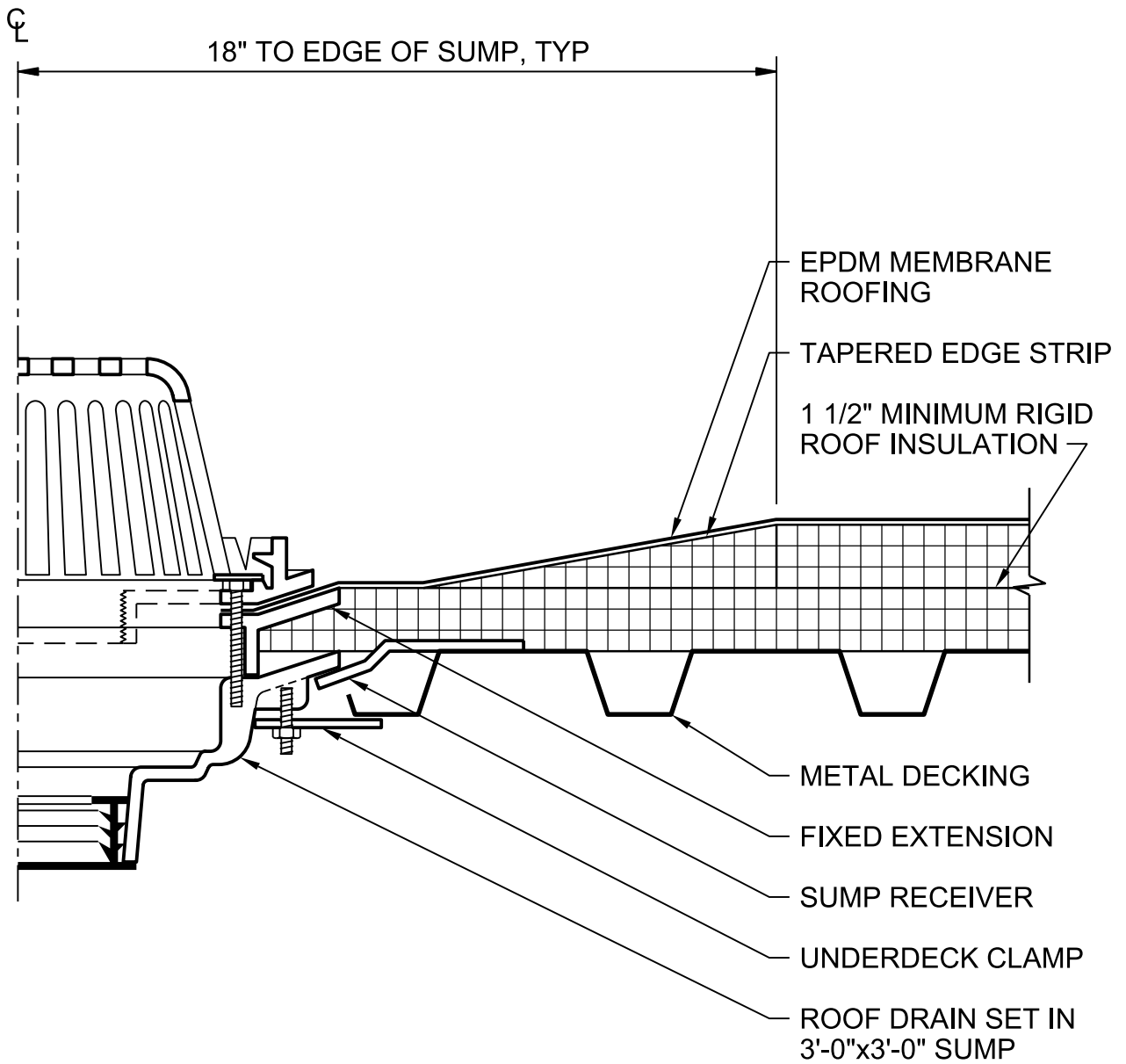


BASE FLASHING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0753-004



NOTES:

1. DRAIN PIPES AND LEADERS NOT SHOWN, SEE MECHANICAL.

ROOF DRAIN (METAL DECK)

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0753-006

CONT SEALANT AT TOP

CONCEALED FASTENER AT CONT CLEAT

PREFINISHED MTL FLASHING & FASCIA SET IN SEALANT, SMACNA FIG 1-30

OVERFLOW SCUPPER EL MAX 2" ABOVE PRIMARY ROOF DRAIN

EPDM MEMBRANE FLASHING

SHEET METAL SCUPPER FLASHING

PT NAILER

EPDM MEMBRANE ROOFING

RIGID ROOF INSULATION

TOS

METAL DECKING

STEEL FRAMING, SEE STRUCT DWGS

8"

3"

SECTION

EPDM MEMBRANE FLASHING

SHEET METAL CLOSURE FLASHING

CONT SEALANT AT TOP

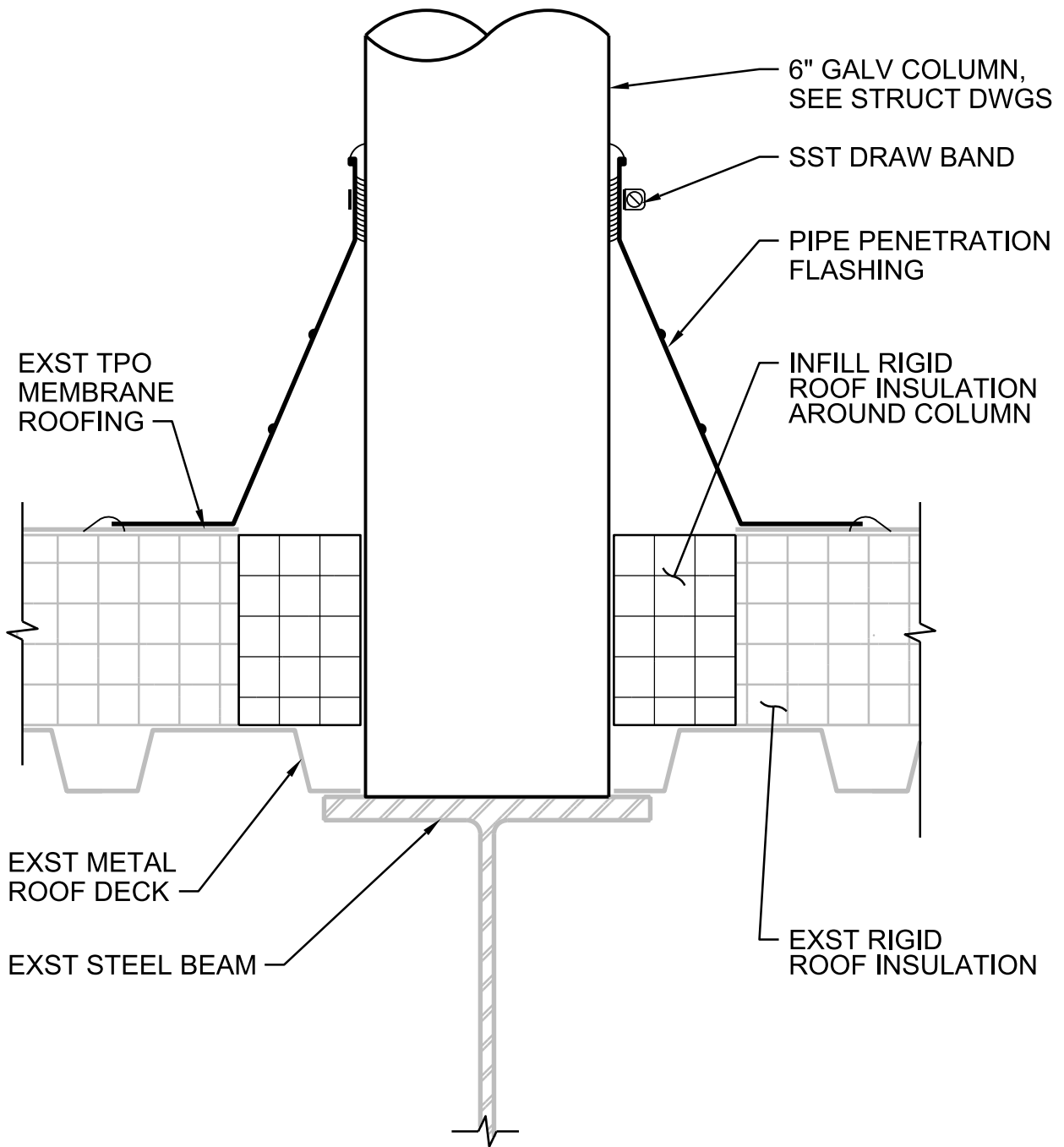
PLAN

OVERFLOW SCUPPER

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0753-007

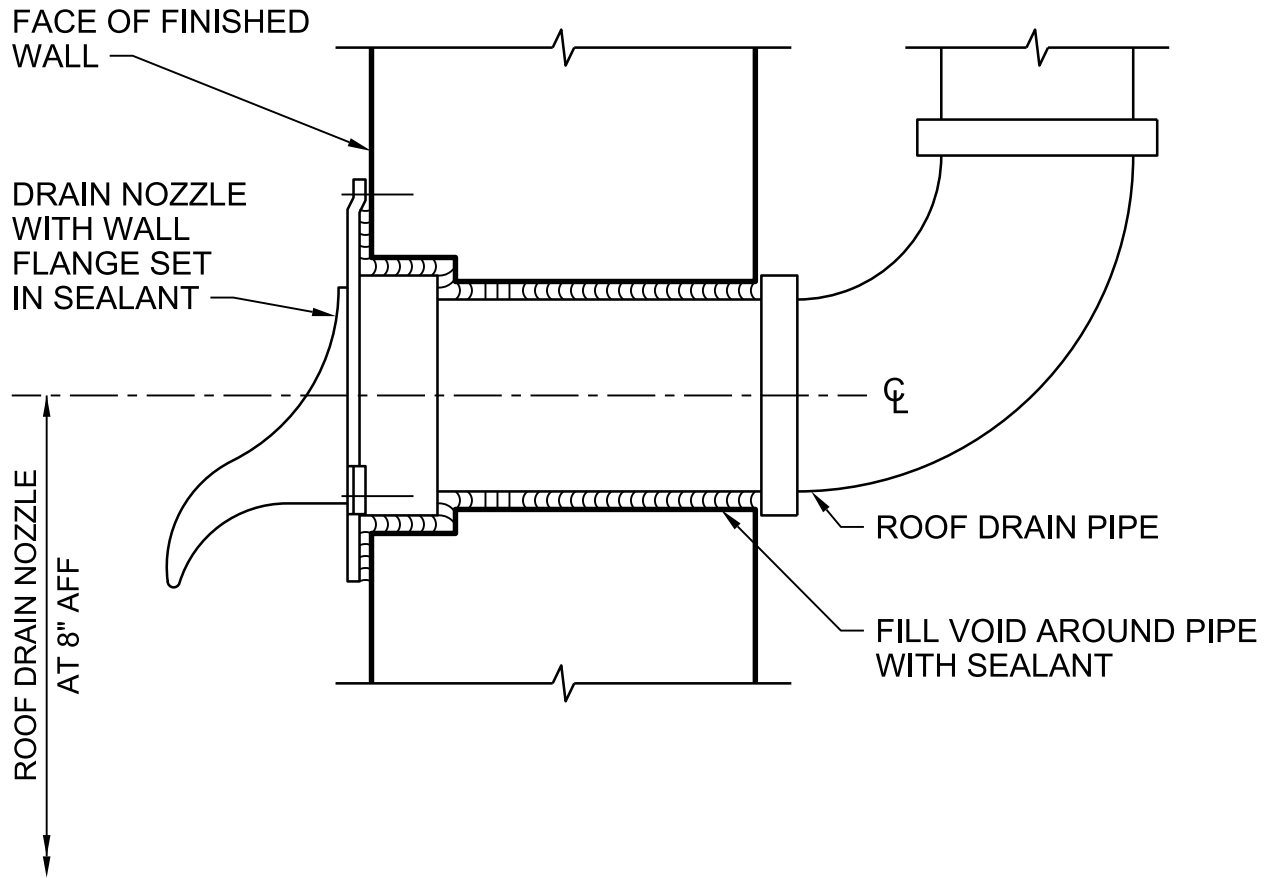


ROOF PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0754-100

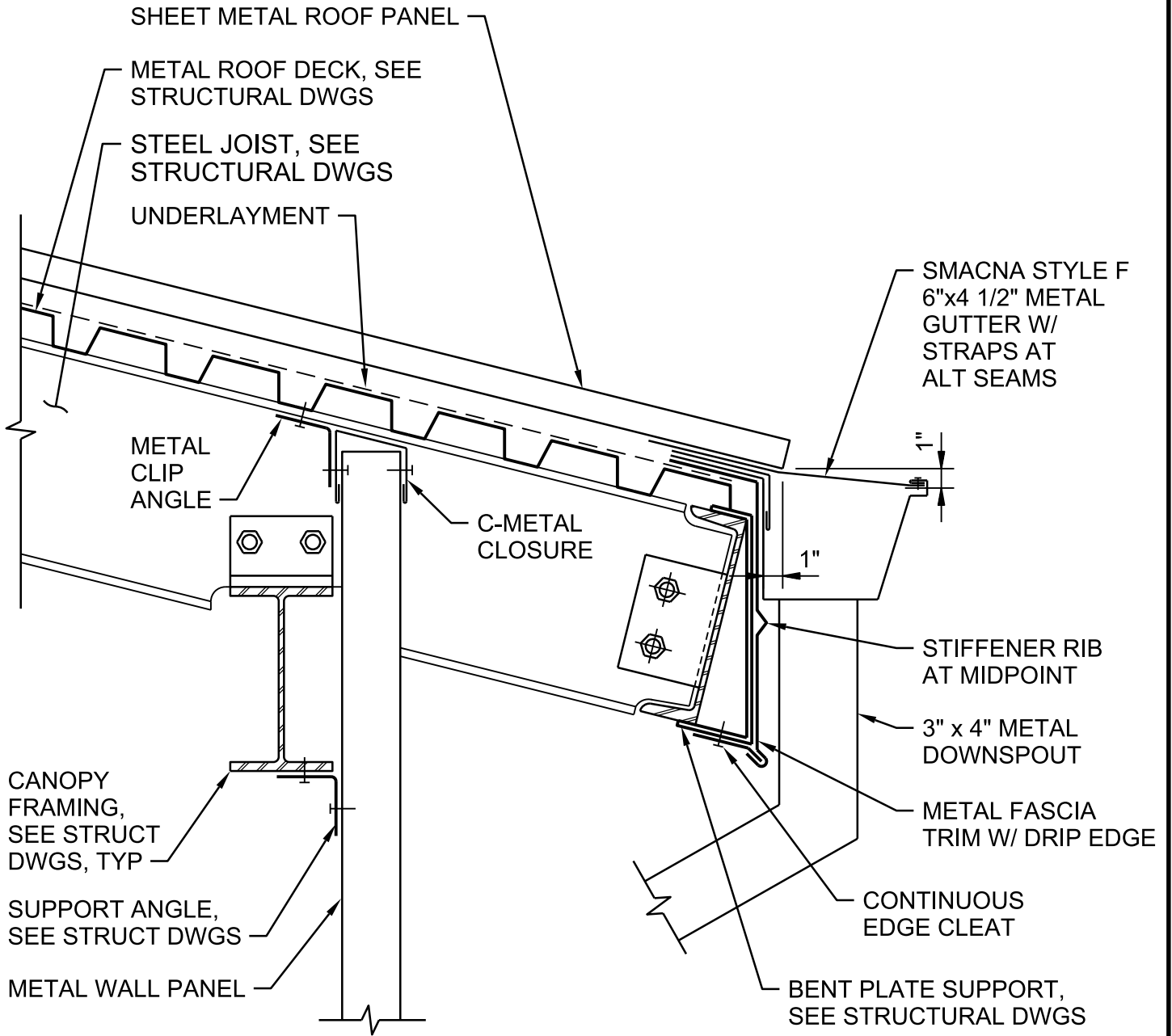


ROOF DRAIN NOZZLE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0762-003

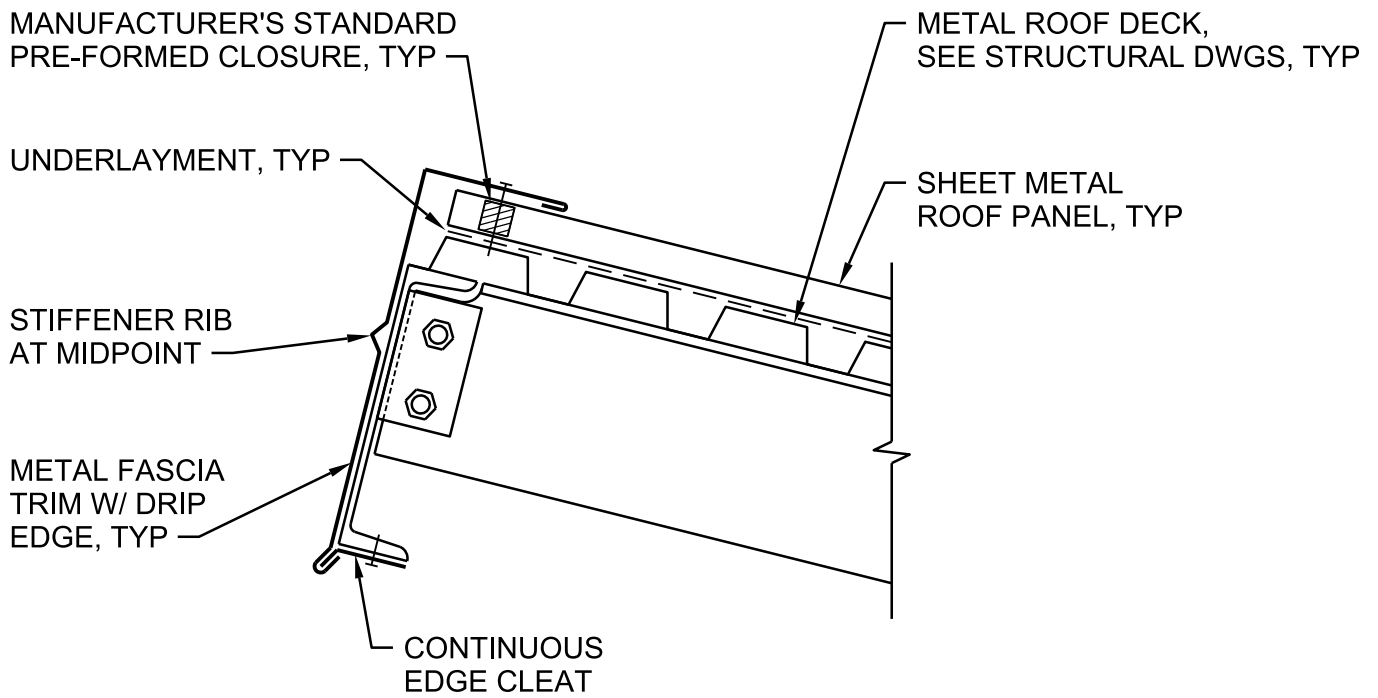


LOW EAVE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0762-006

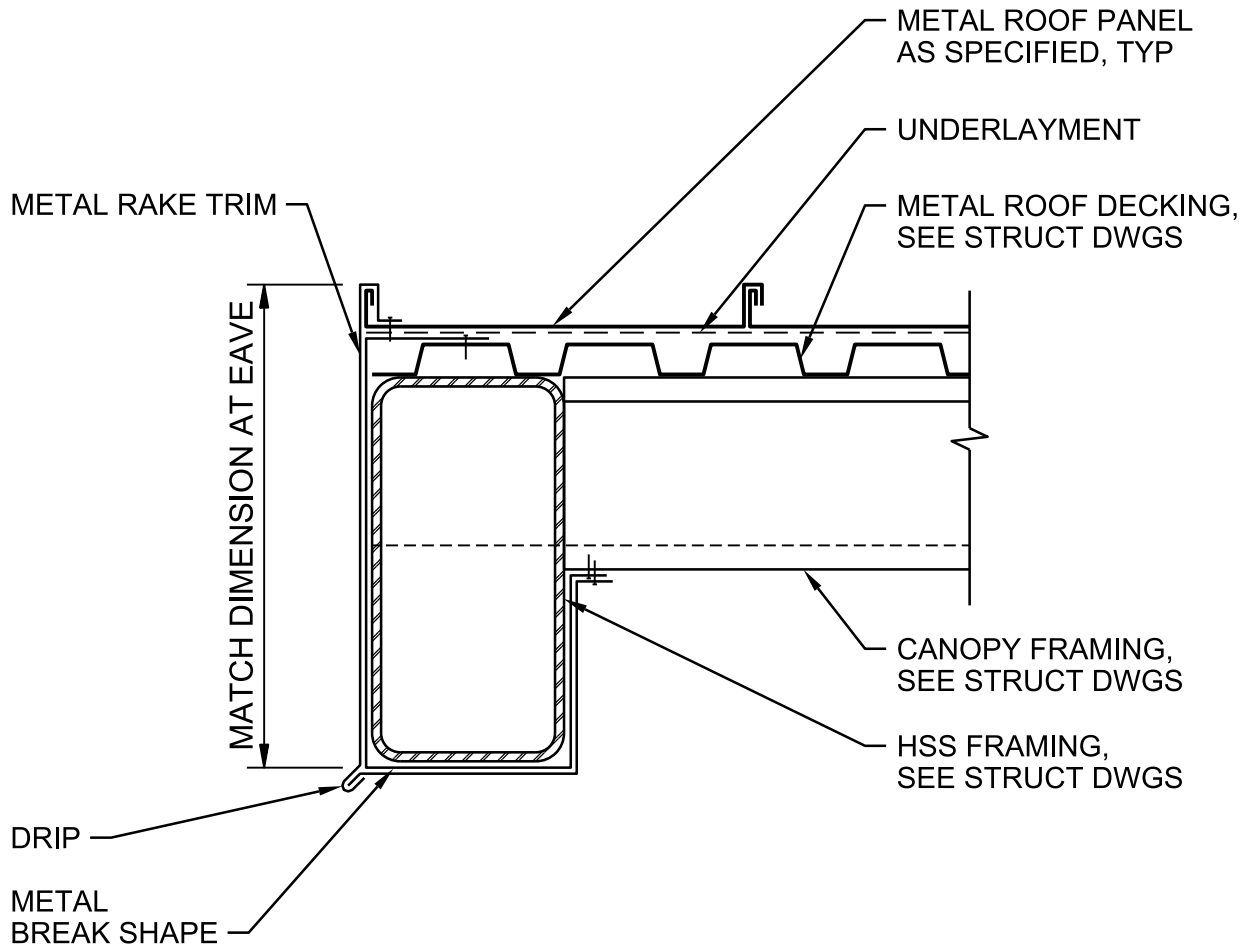


HIGH EAVE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0762-007

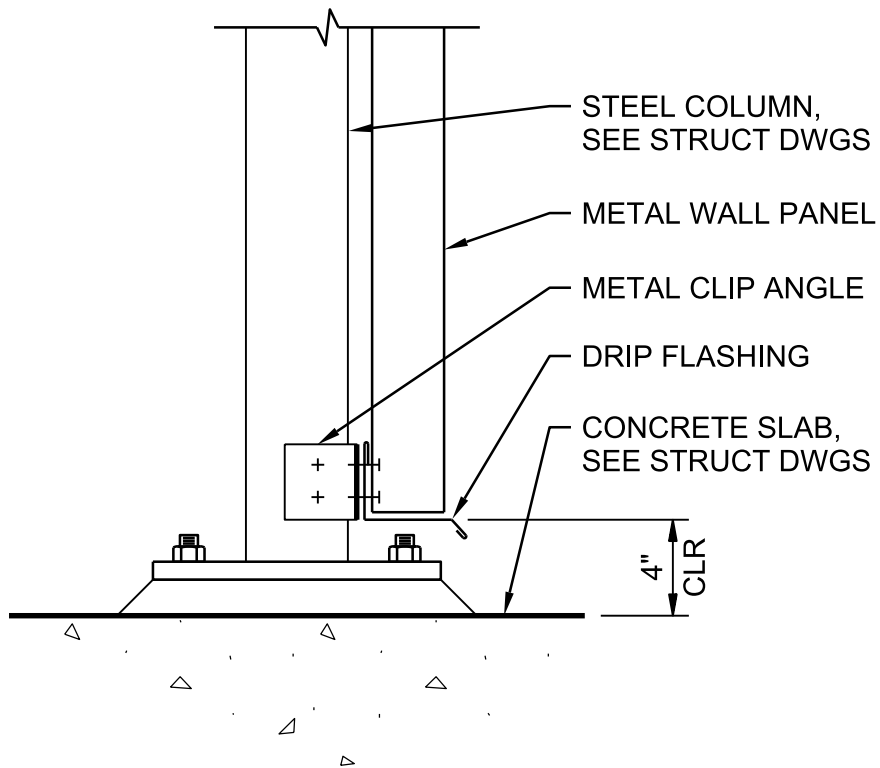


RAKE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0762-008

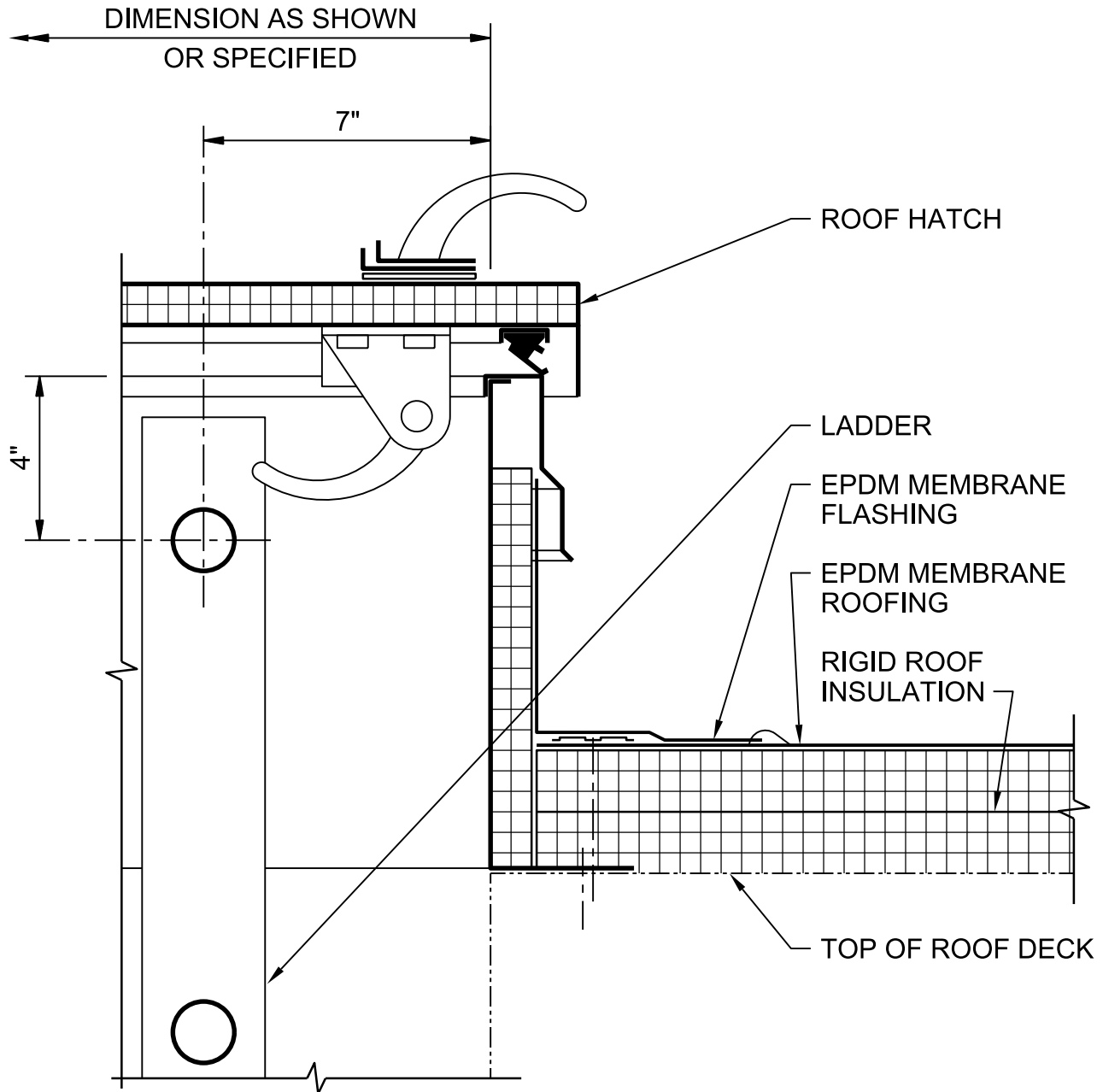


BASE OF WALL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0762-009

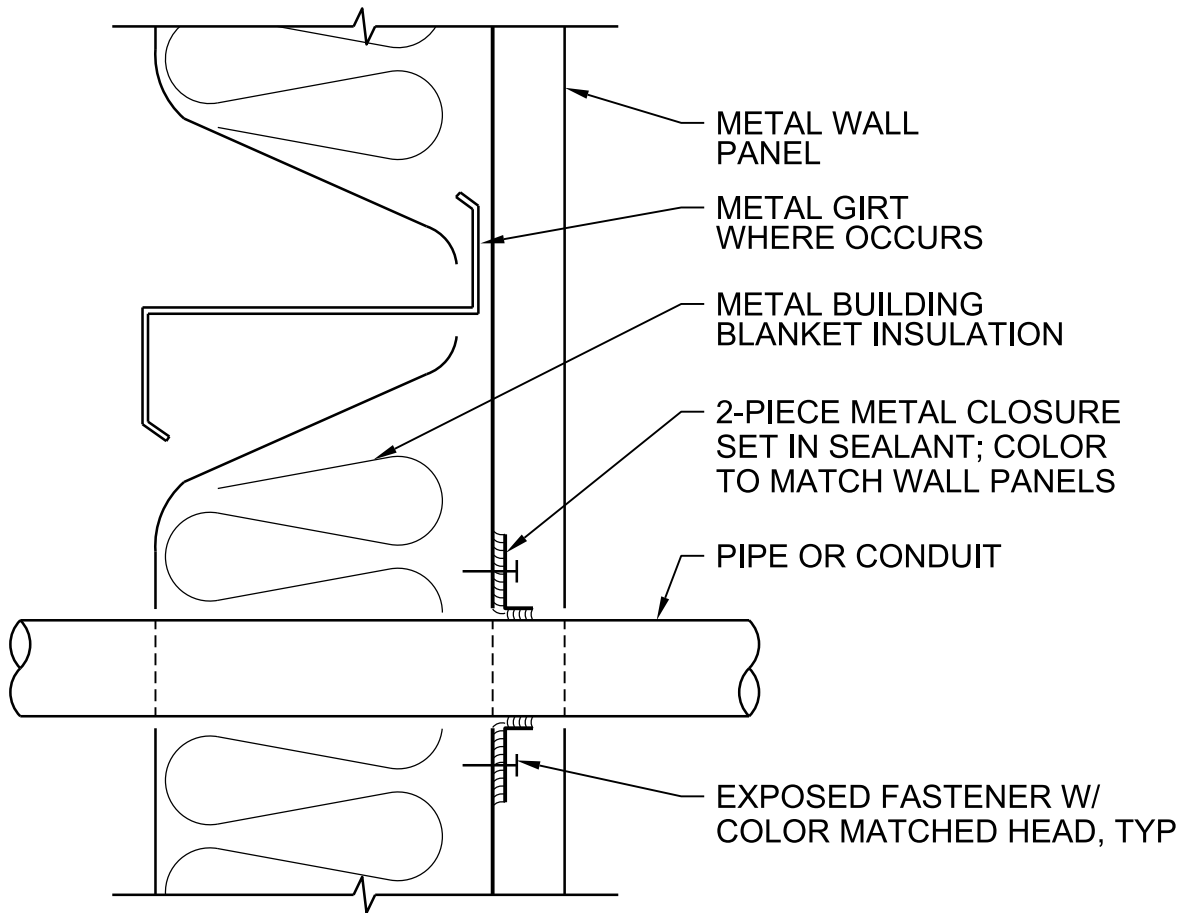


ROOF HATCH

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0770-038

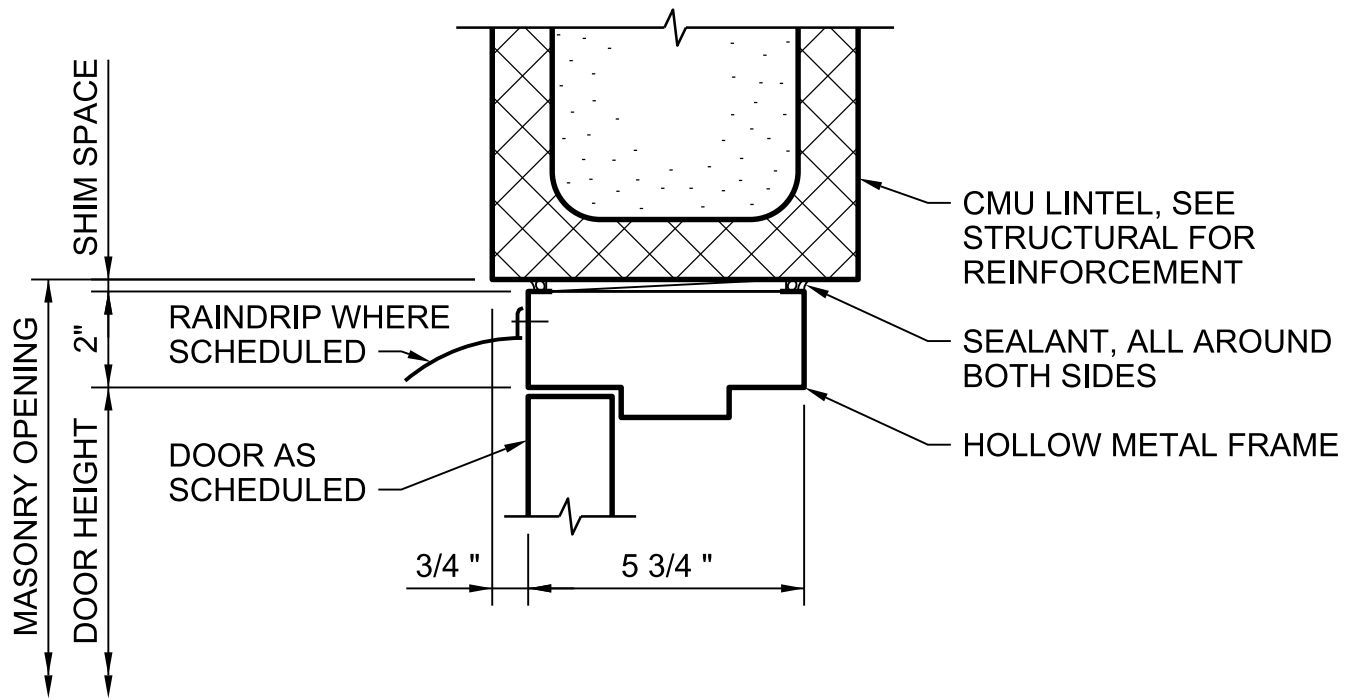


EXTERIOR WALL PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0790-102

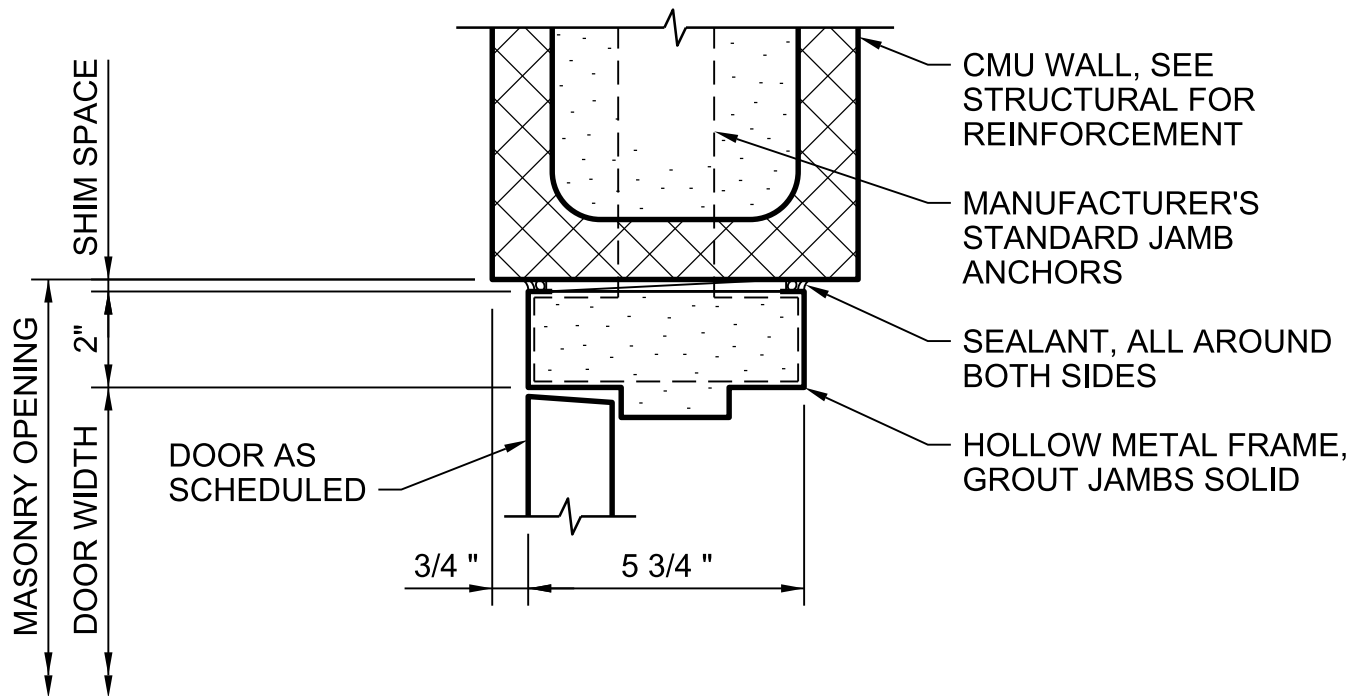


DOOR HEAD

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0811-003

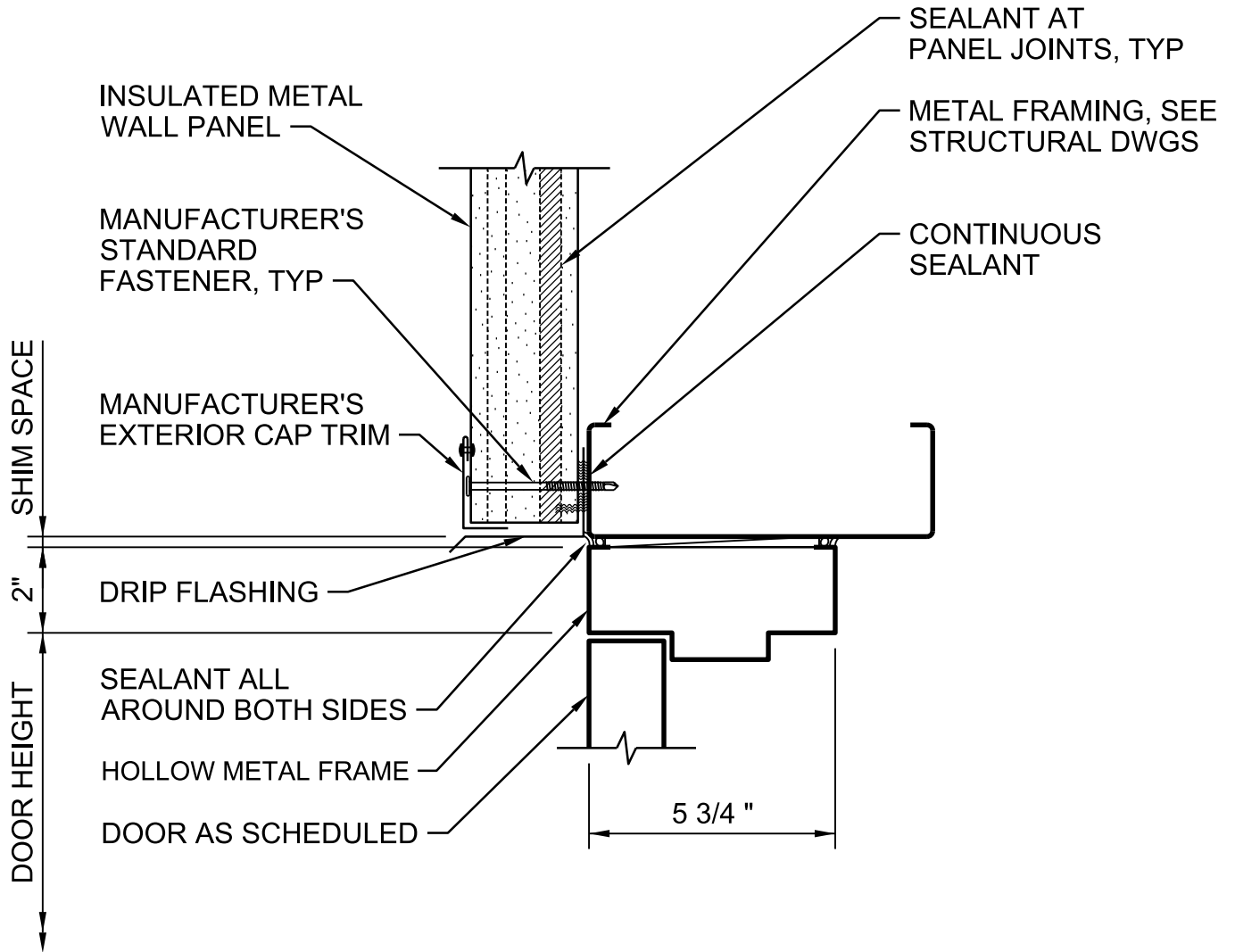


DOOR JAMB

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0811-004

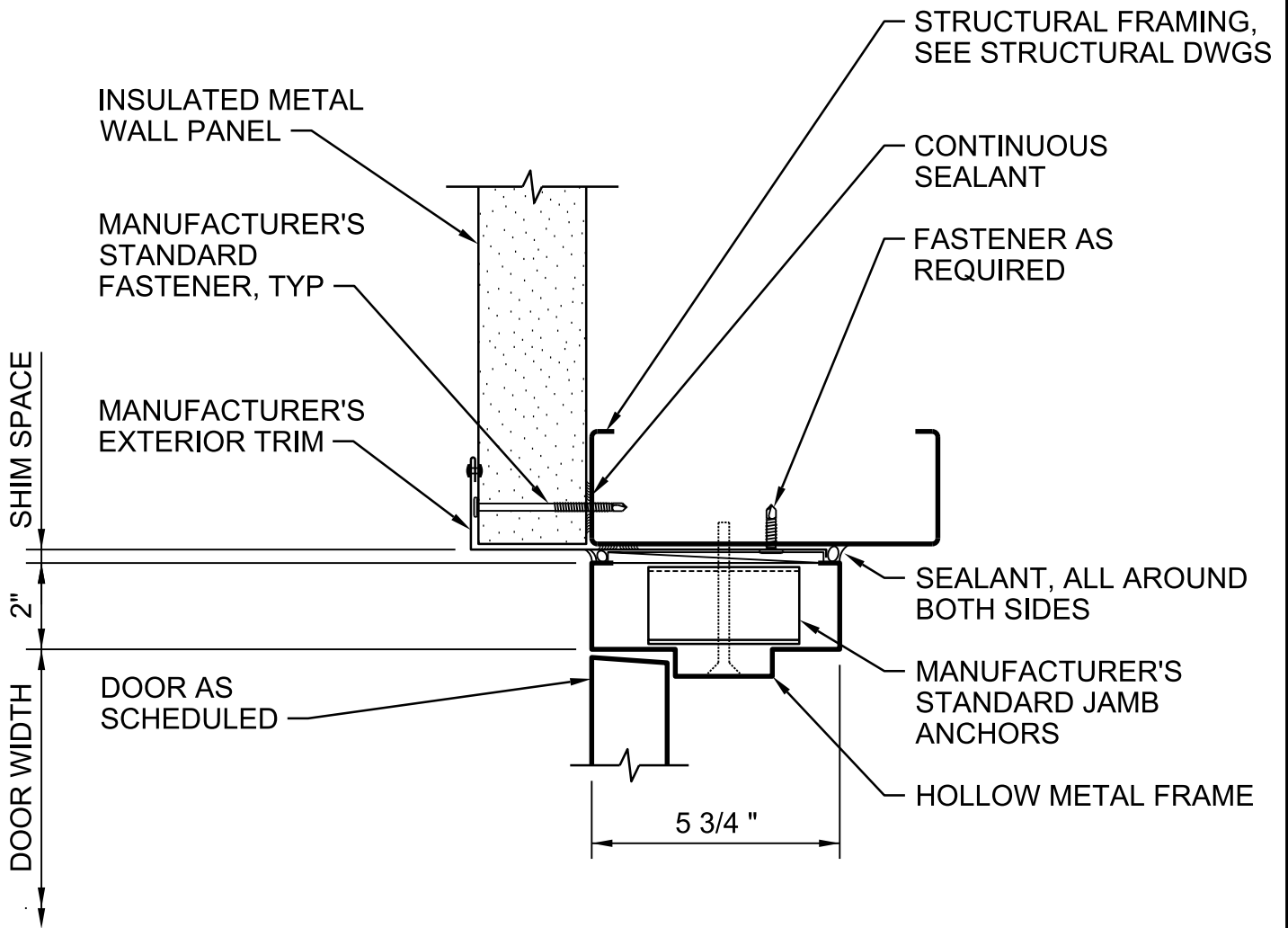


DOOR HEAD

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

0811-101

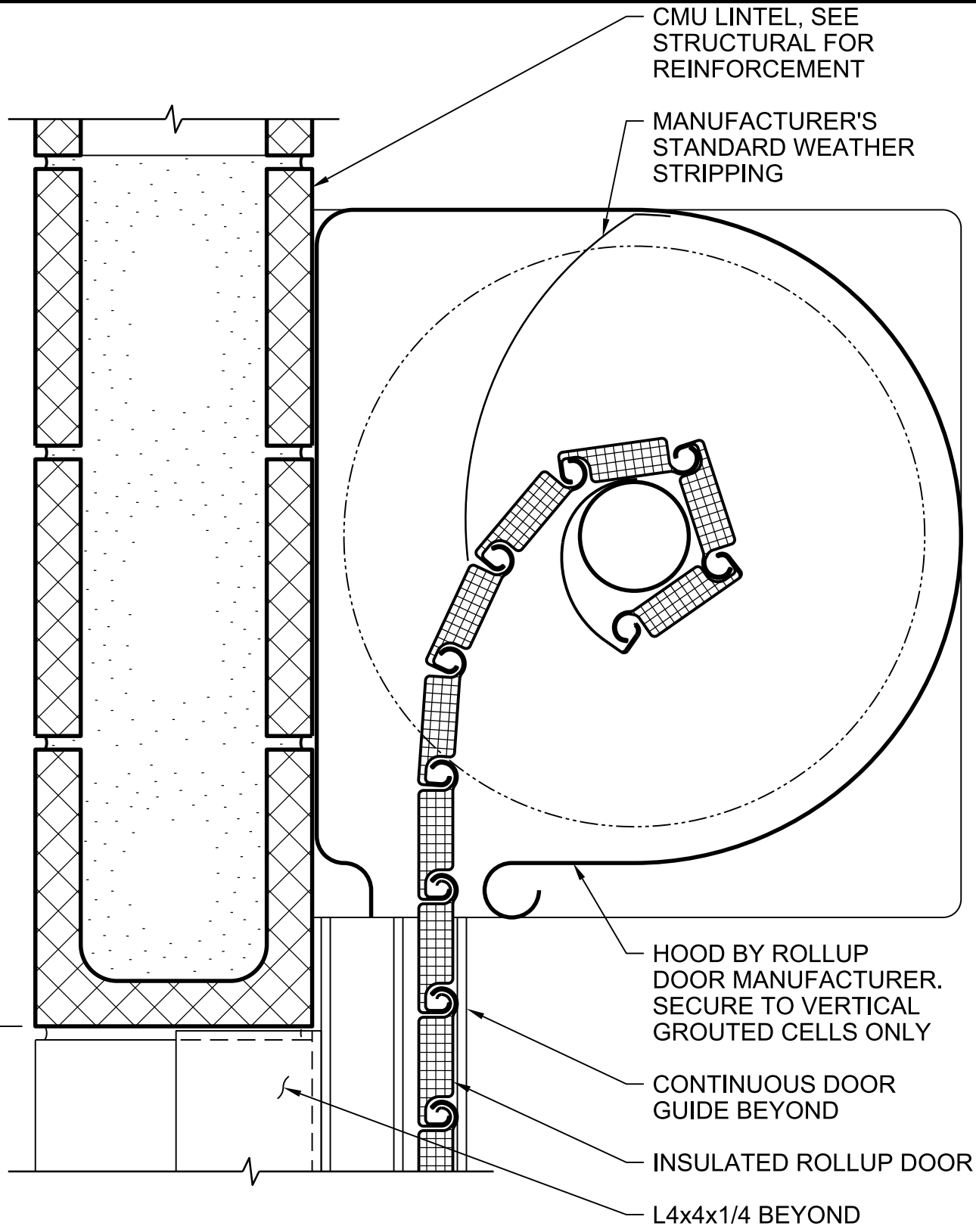


DOOR JAMB

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0811-102

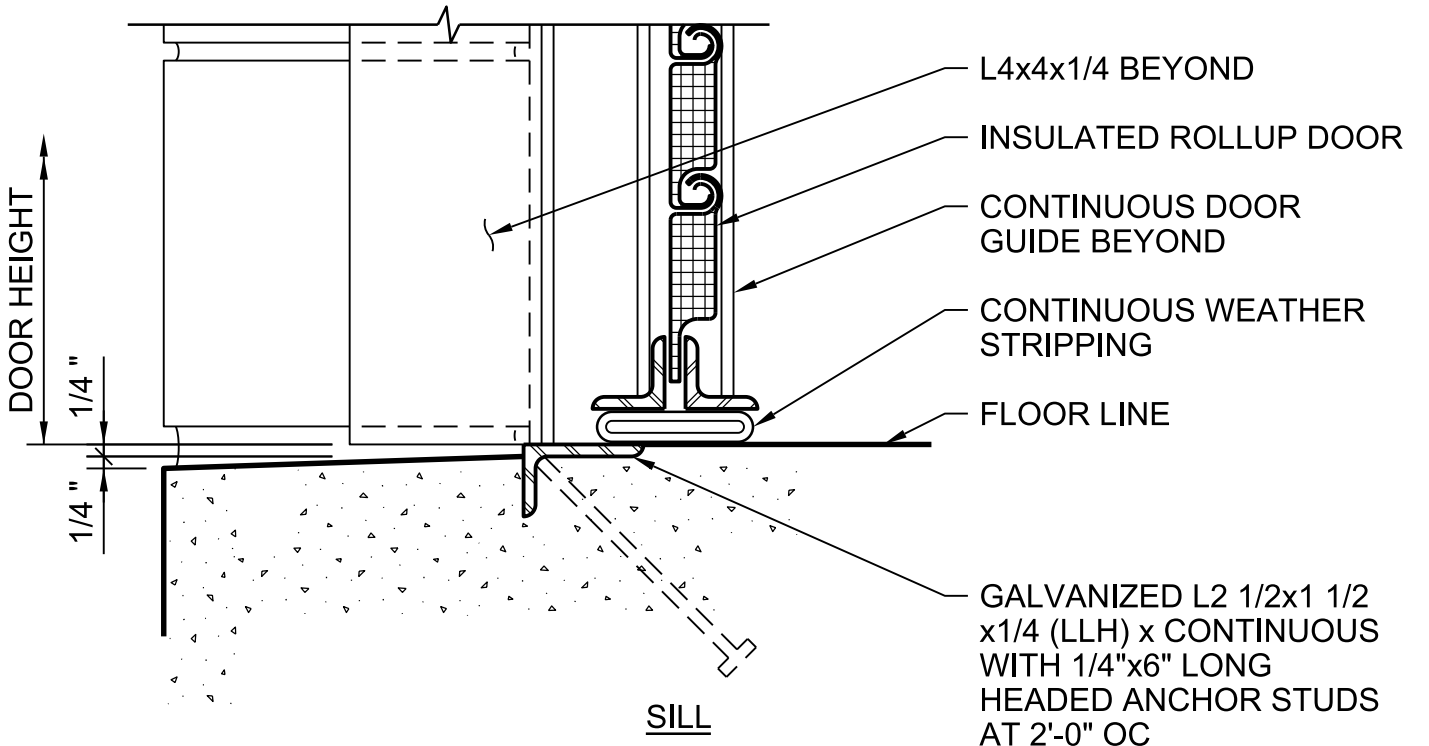
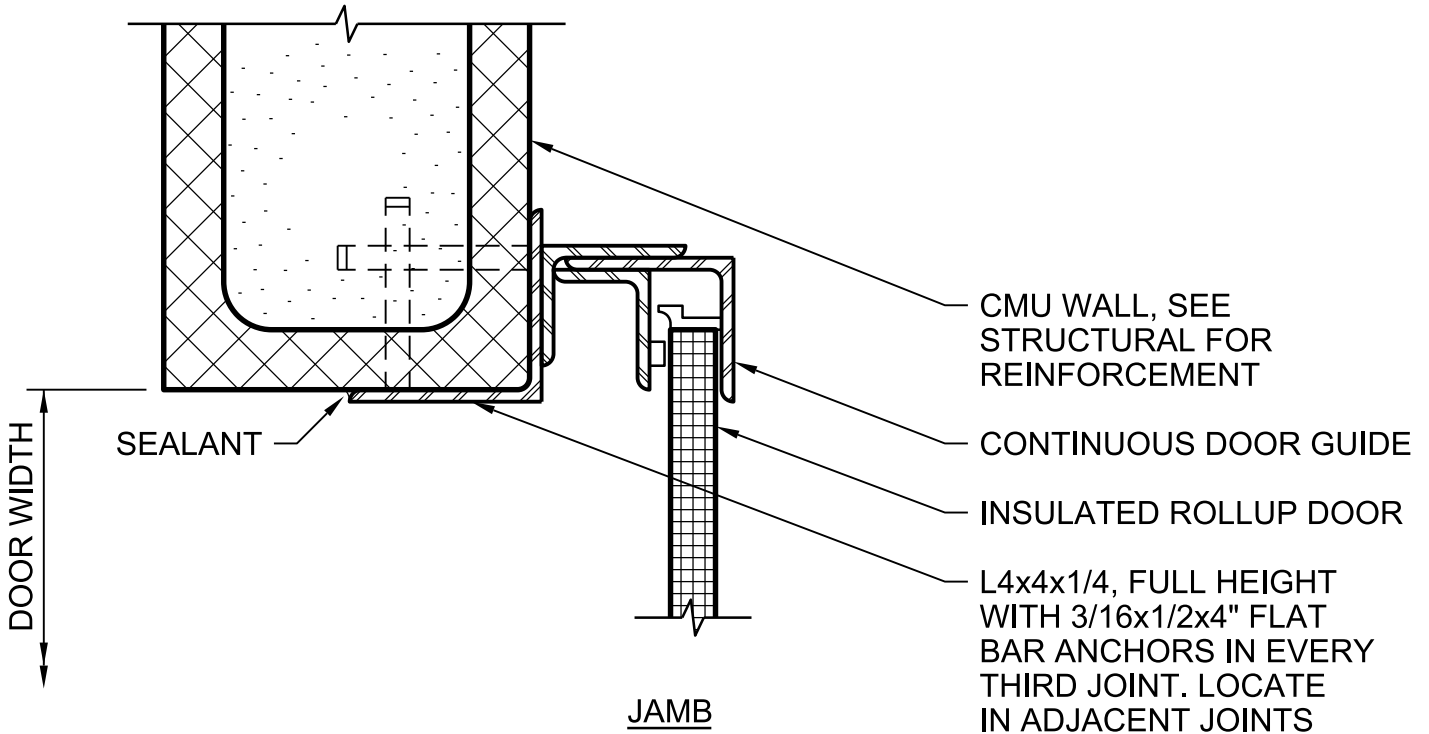


ROLLUP DOOR HEAD (INSULATED)

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0833-007

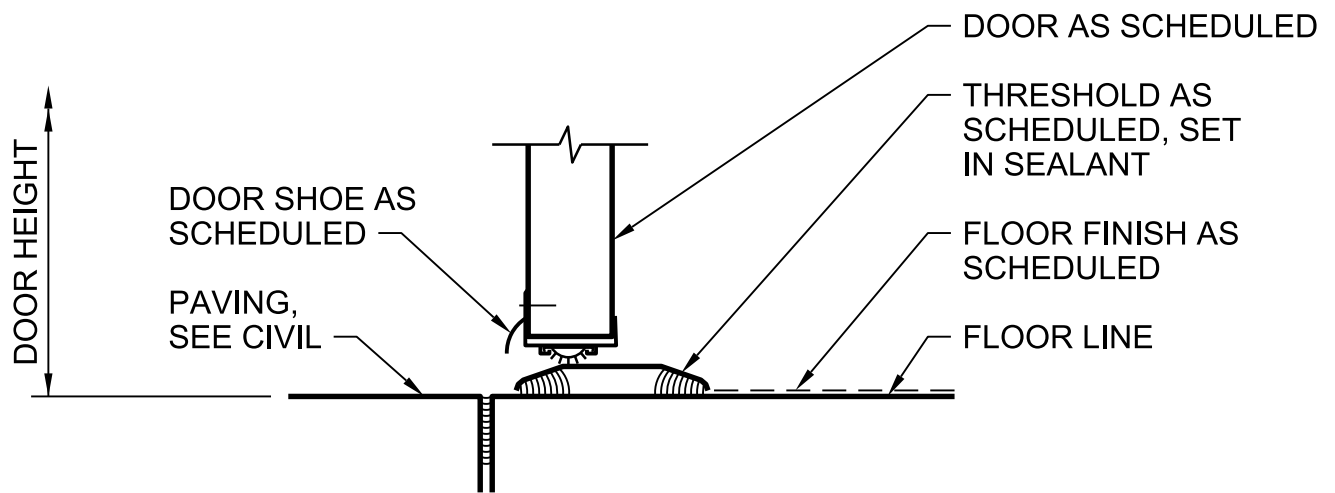


ROLLUP DOOR JAMB AND SILL (INSULATED)

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0833-008

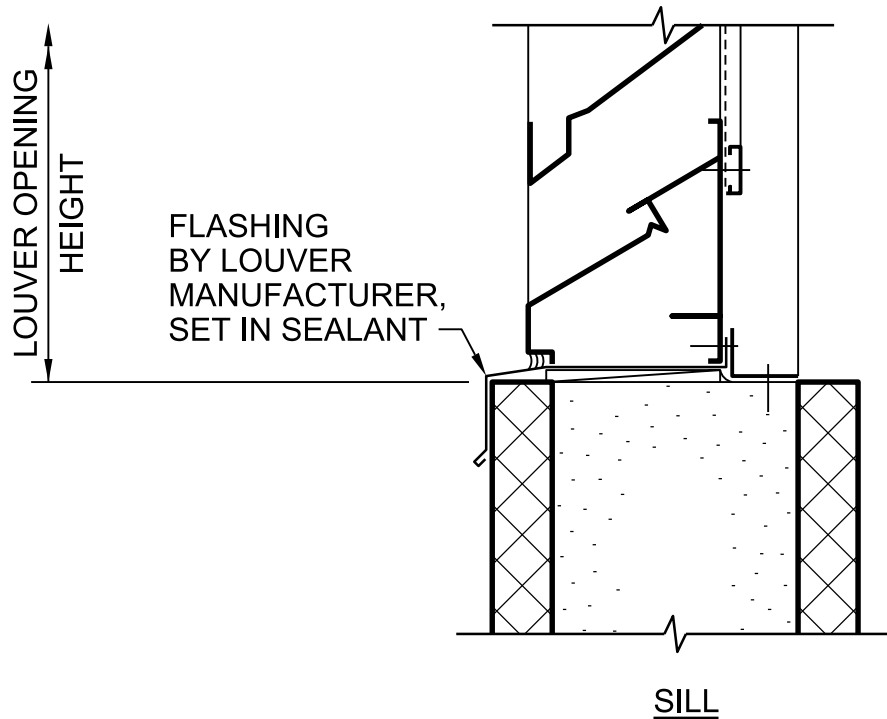
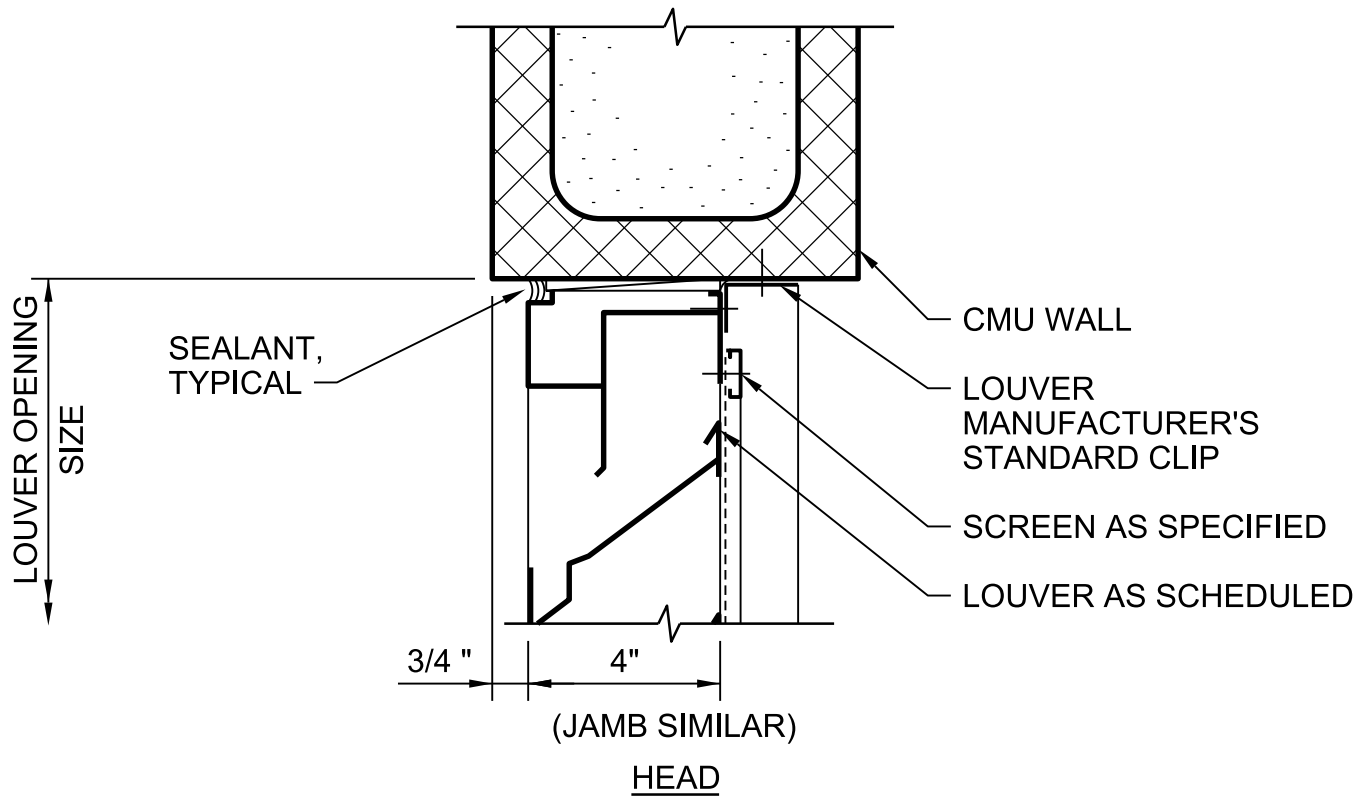


DOOR SILL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0871-001

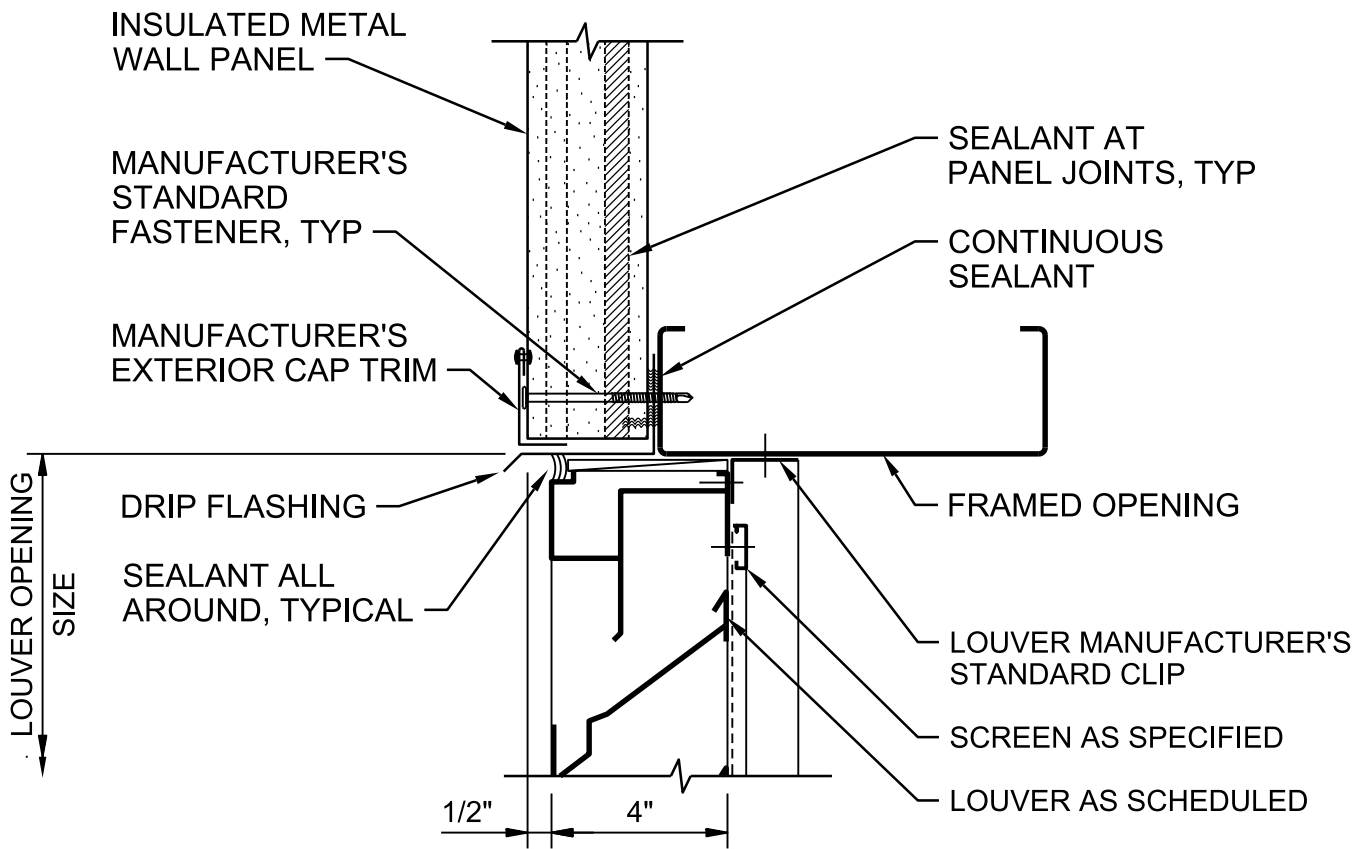


LOUVER HEAD AND SILL

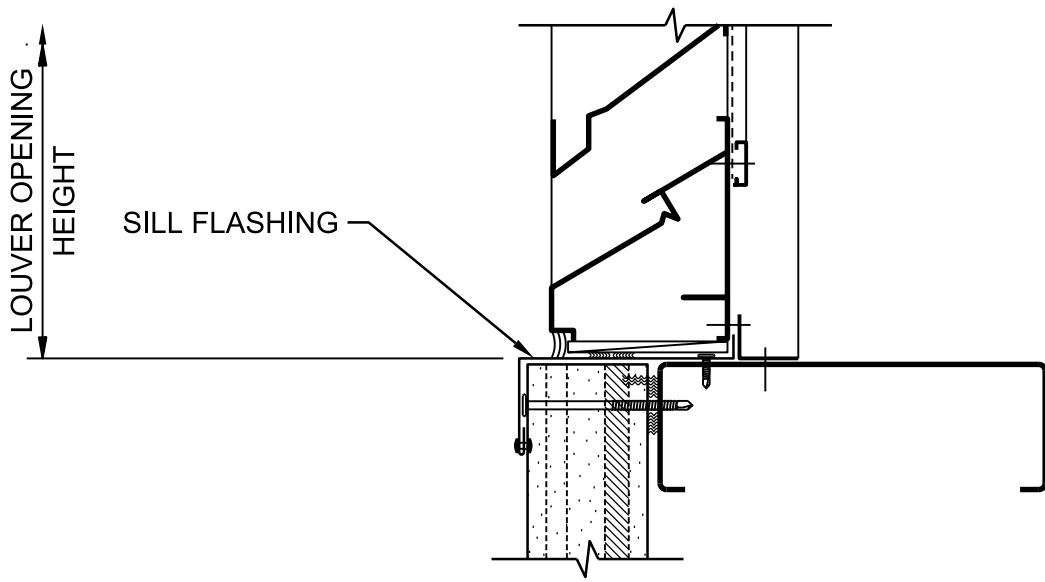
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0890-002



(JAMB SIMILAR)
HEAD



SILL

LOUVER HEAD AND SILL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

0890-003

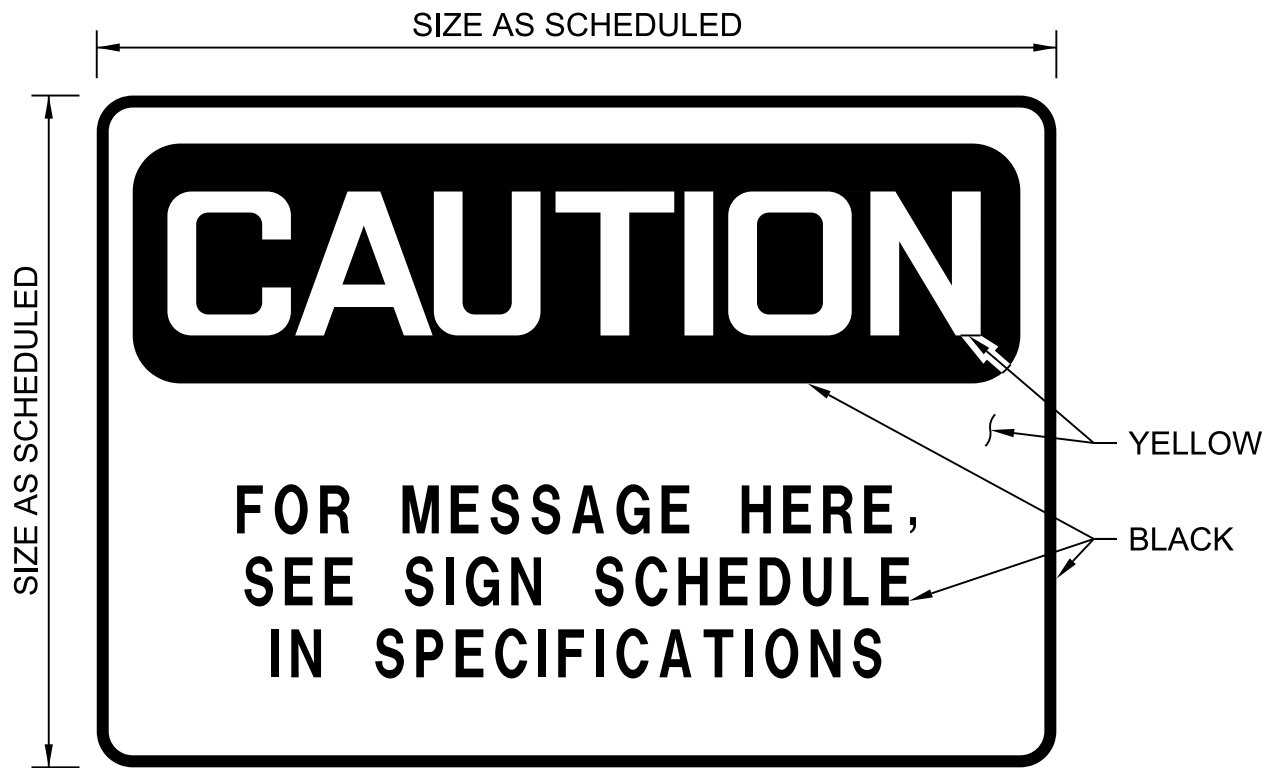


DANGER SIGN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1014-001

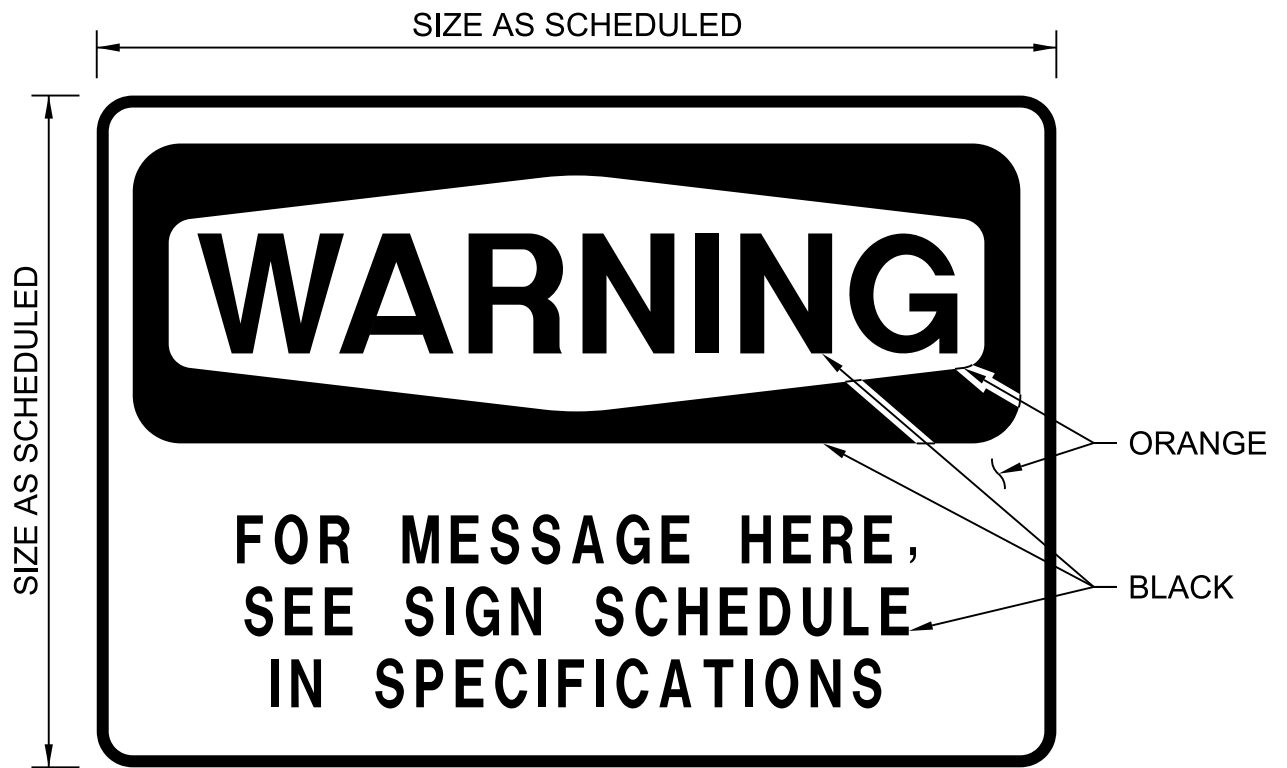


CAUTION SIGN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1014-002



WARNING SIGN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

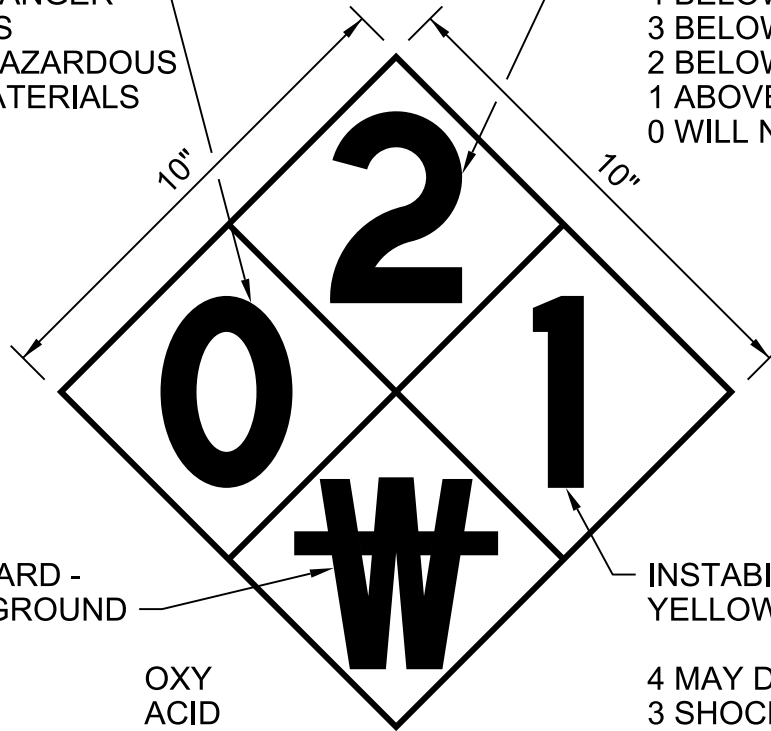
1014-003

HEALTH HAZARD -
BLUE BACKGROUND

4 DEADLY
3 EXTREME DANGER
2 HAZARDOUS
1 SLIGHTLY HAZARDOUS
0 NORMAL MATERIALS

FLAMMABILITY HAZARD -
RED BACKGROUND

FLASH POINTS
4 BELOW 73 F
3 BELOW 100 F
2 BELOW 200 F
1 ABOVE 200 F
0 WILL NOT BURN



SPECIAL HAZARD -
WHITE BACKGROUND

OXIDIZER
ACID
ALKALI
CORROSIVE
USE NO WATER
RADIATION HAZARD

OXY
ACID
ALK
COR
W
☢

INSTABILITY HAZARD -
YELLOW BACKGROUND

4 MAY DETONATE
3 SHOCK & HEAT MAY DETONATE
2 VIOLENT CHEMICAL CHANGE
1 UNSTABLE IF HEATED
0 STABLE

NOTES:

1. LETTER HEIGHT: 4"
LETTER COLOR: BLACK
2. NUMBERS AND LETTERS ON ABOVE SIGNAL DETAIL
ARE EXAMPLES ONLY. SEE SPECIFICATION 10 14 00
FOR REQUIREMENTS ON THIS PROJECT.

HAZARDOUS MATERIAL SIGNAL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1014-006

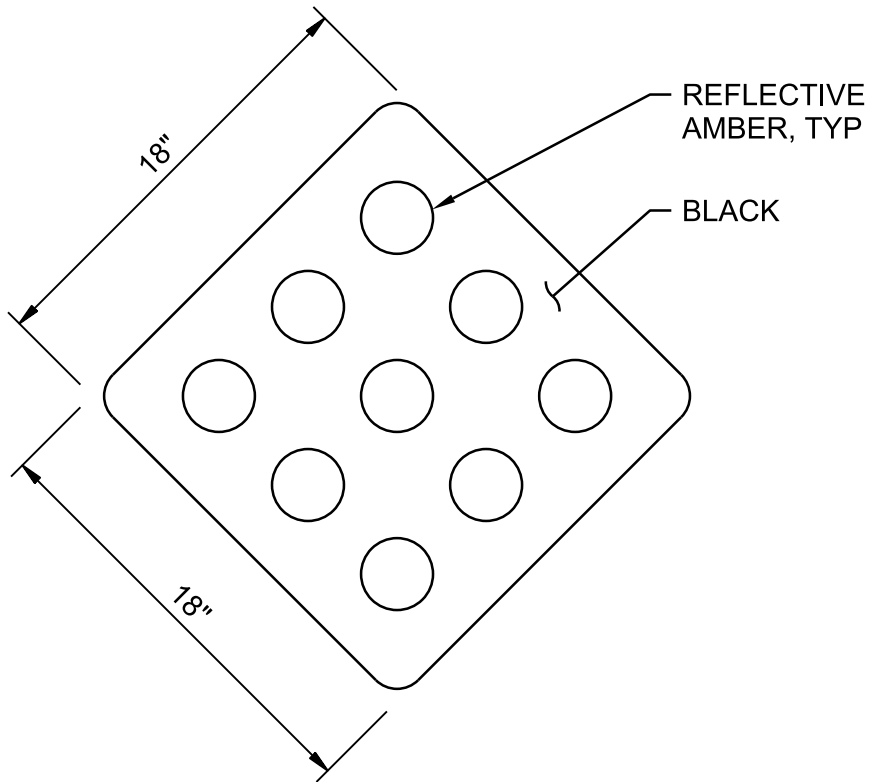


NOTICE SIGN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1014-008

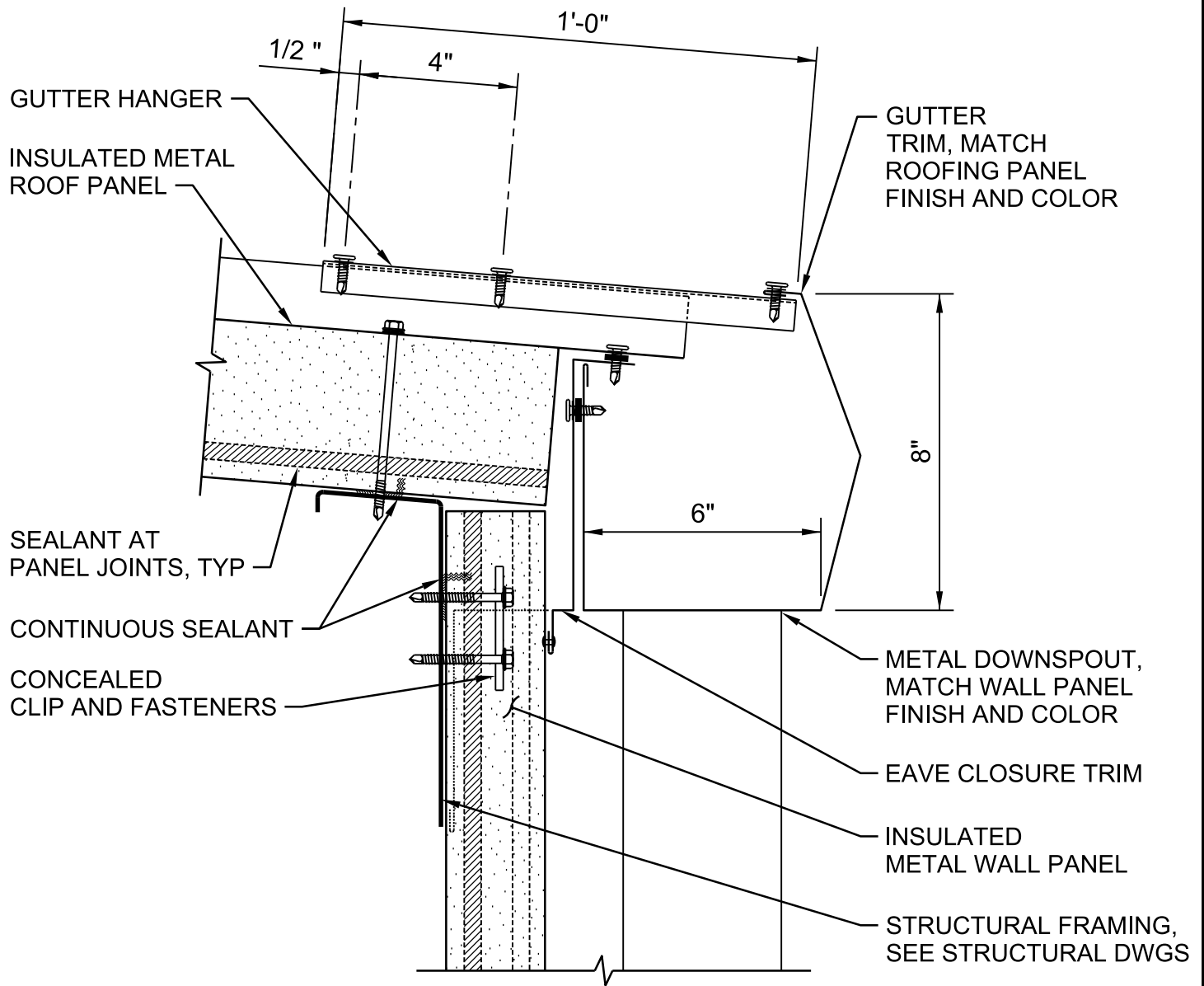


REFLECTOR MARKER SIGN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1014-101

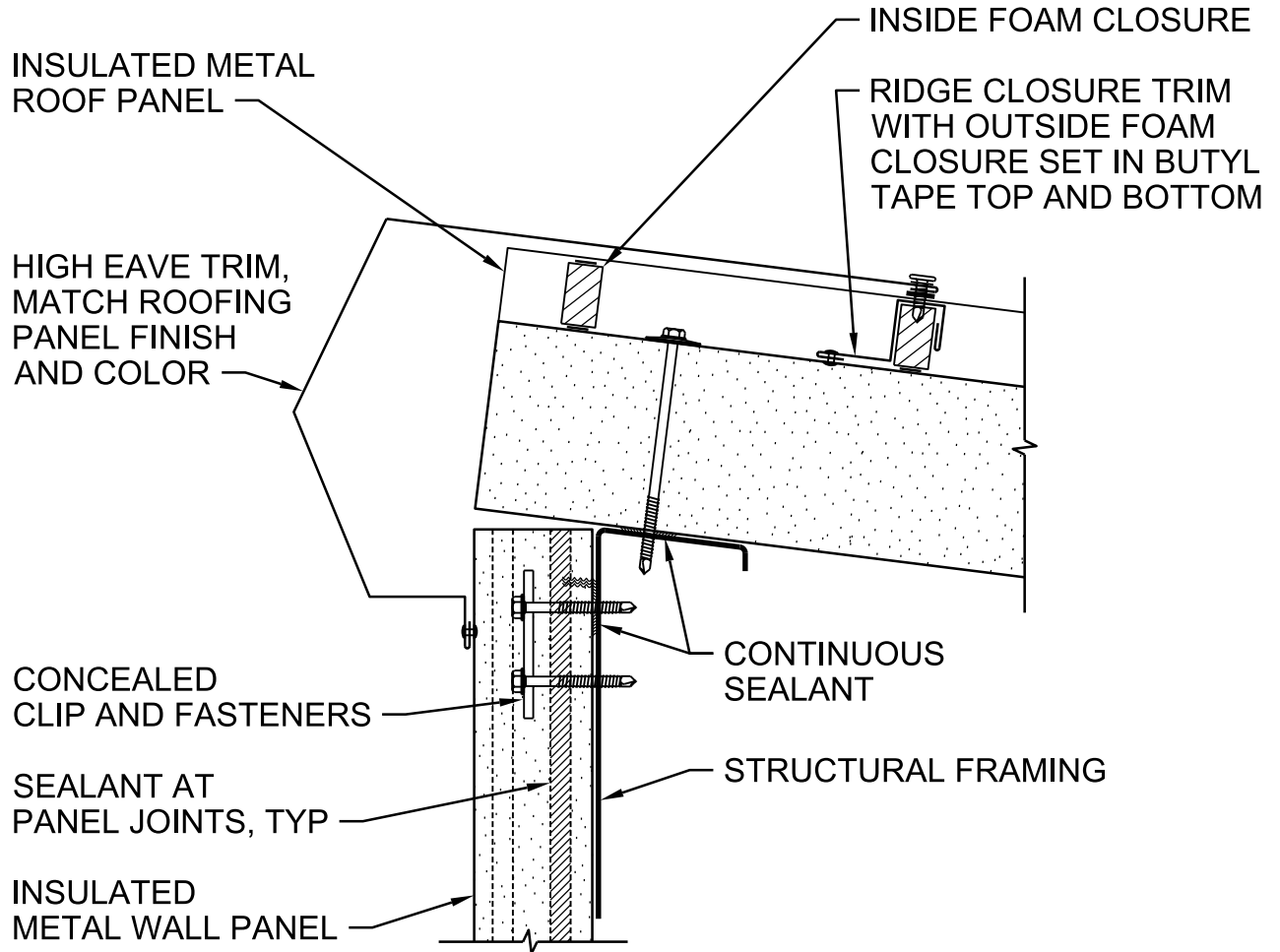


LOW EAVE AND GUTTER

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1334-001

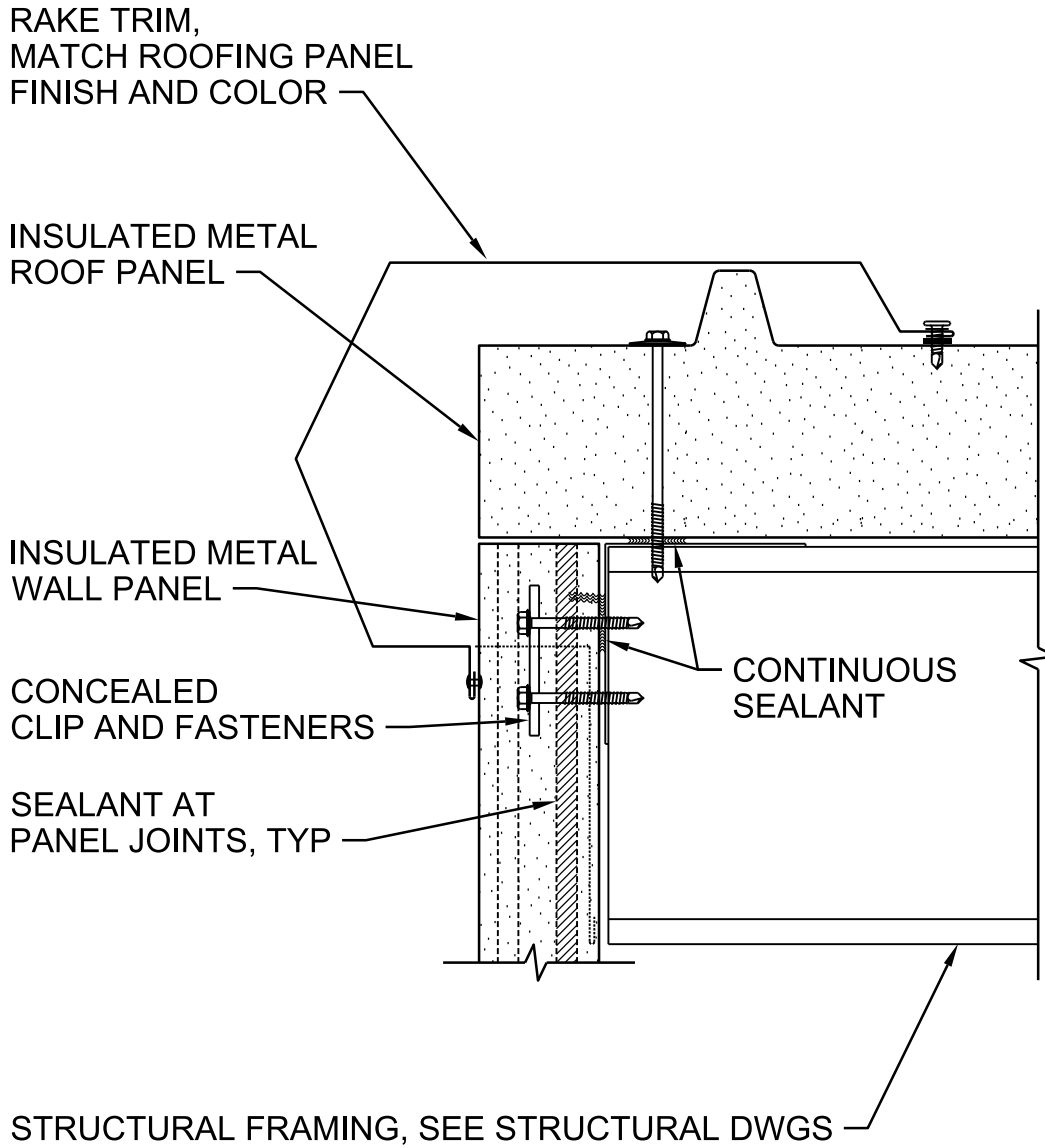


HIGH EAVE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1334-002



RAKE TRIM

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1334-003

SEALANT AT
PANEL JOINTS, TYP

CONT SEALANT, TYP

INSULATED METAL
WALL PANEL

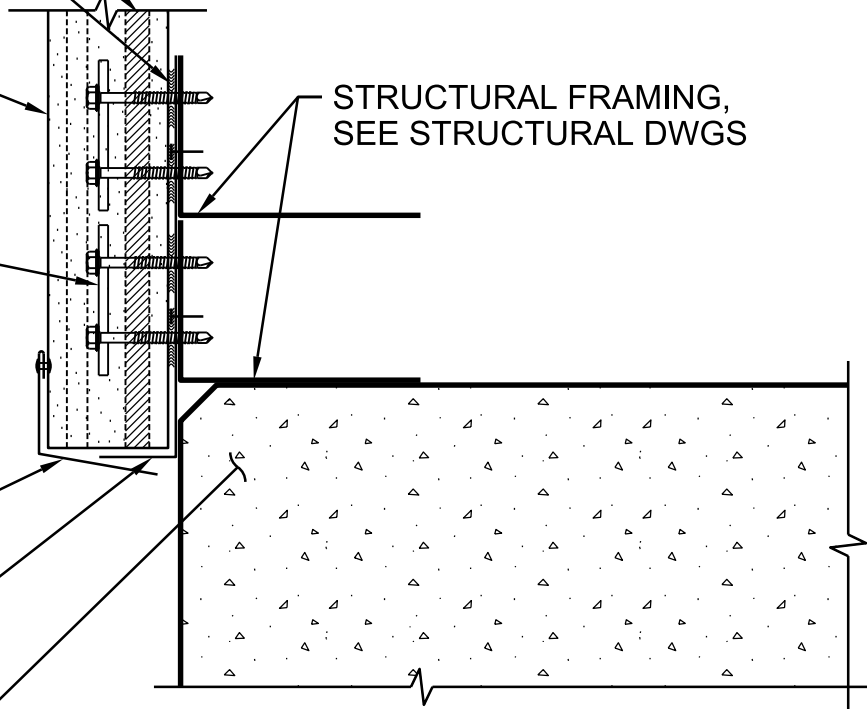
CONCEALED CLIPS
AND FASTENERS

BASE TRIM,
MATCH WALL PANEL
FINISH AND COLOR

MIN 16 GA
GALV BASE ANGLE

CONC FDN SLAB, SEE
STRUCTURAL DWGS

STRUCTURAL FRAMING,
SEE STRUCTURAL DWGS



NOTES:

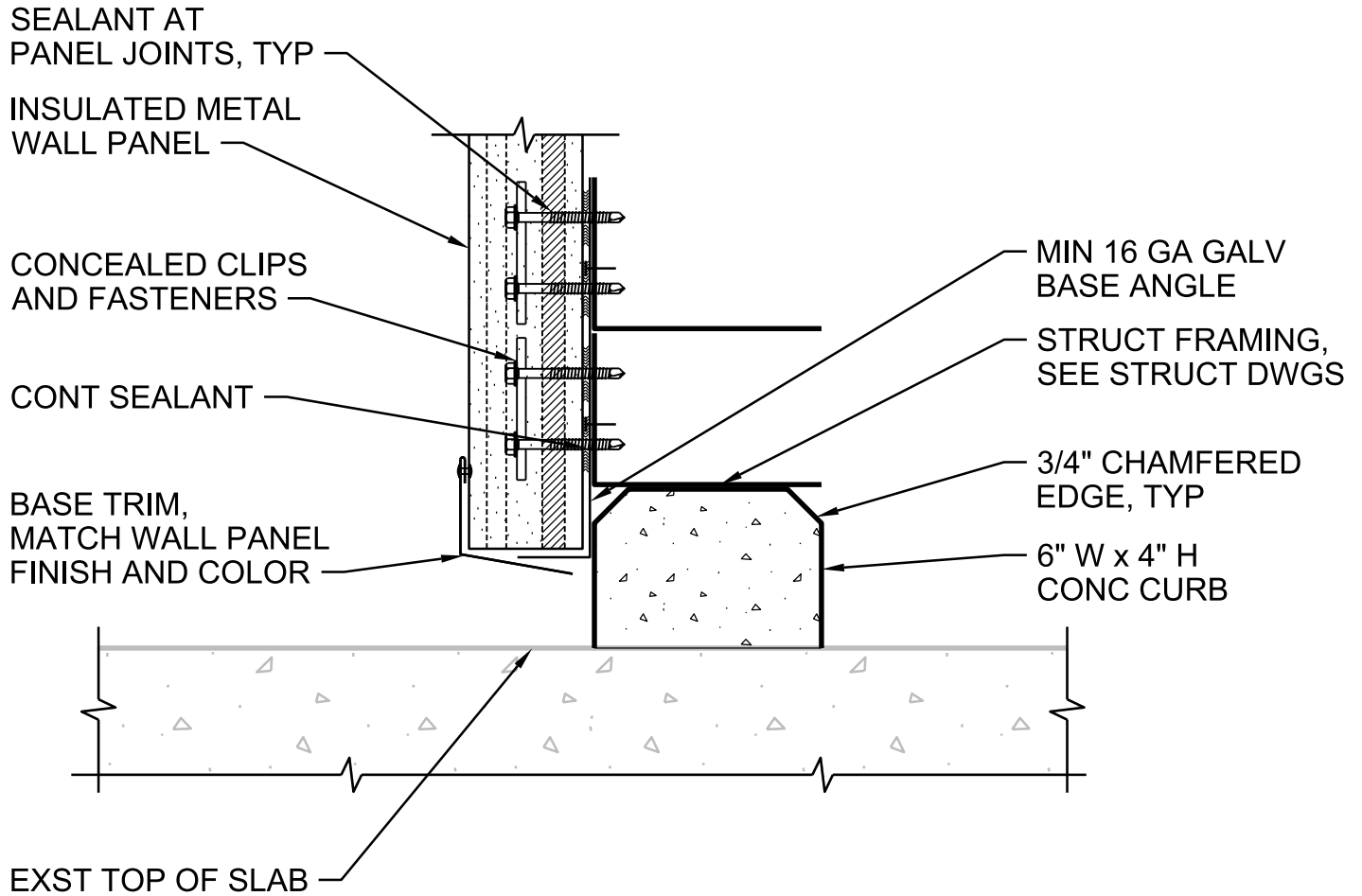
1. COORDINATE EDGE OF FOUNDATION SLAB WITH LOCATION OF COLUMN FACE AS SHOWN IN PLANS.

WALL BASE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1334-004



NOTES:

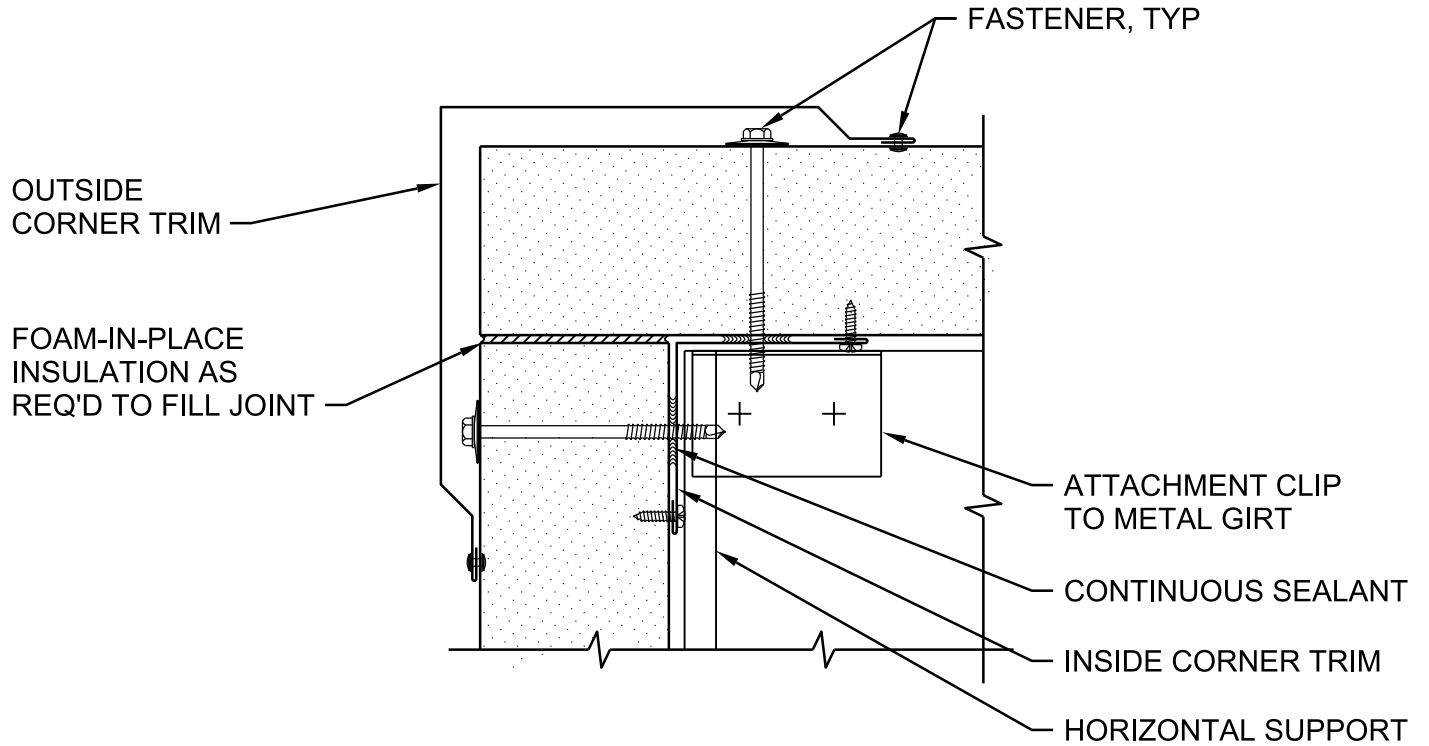
1. COORDINATE EDGE OF CURB WITH LOCATION OF COLUMN FACE AS SHOWN IN PLANS.

WALL BASE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

1334-005

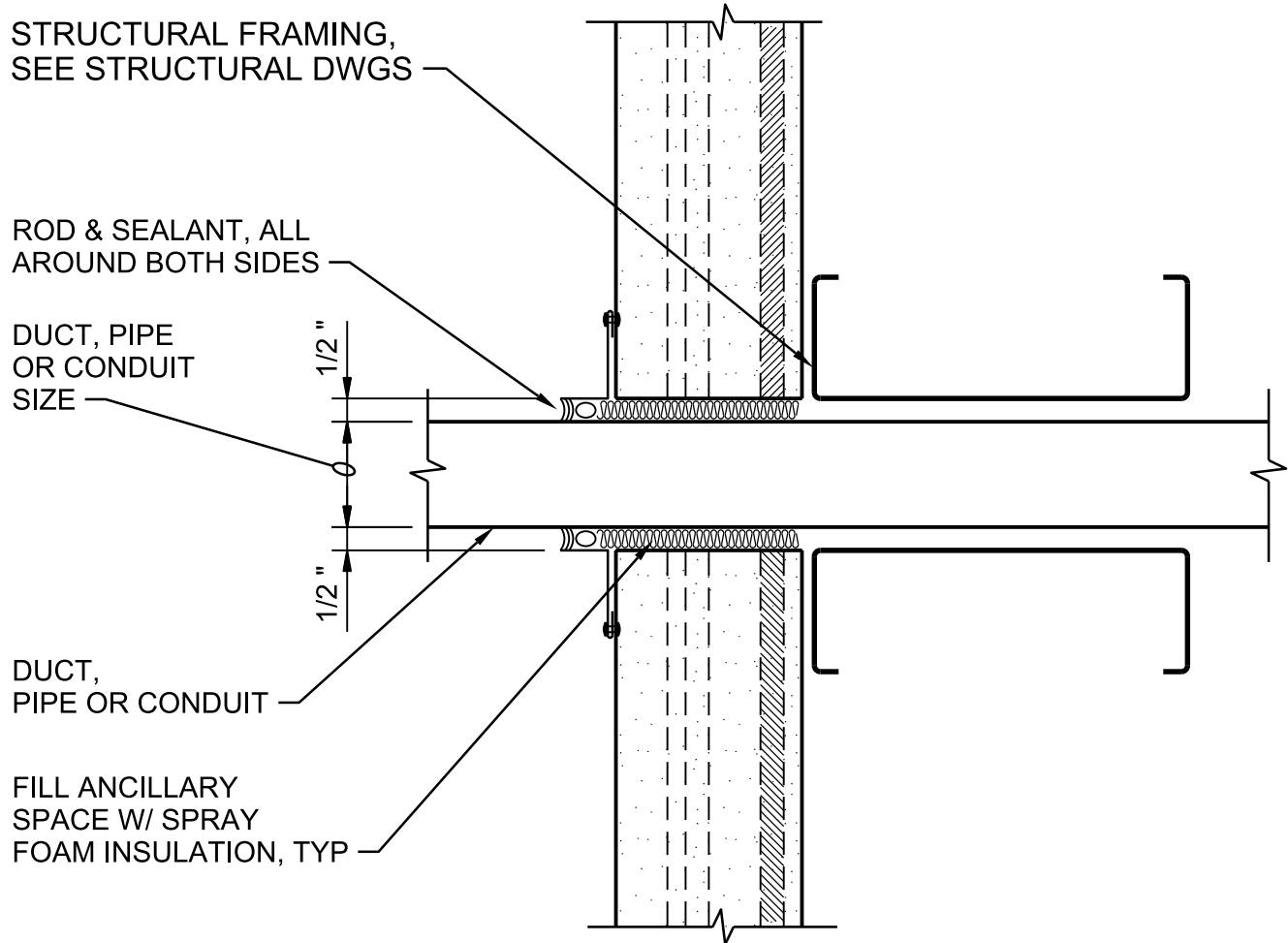


OUTSIDE CORNER

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1334-009

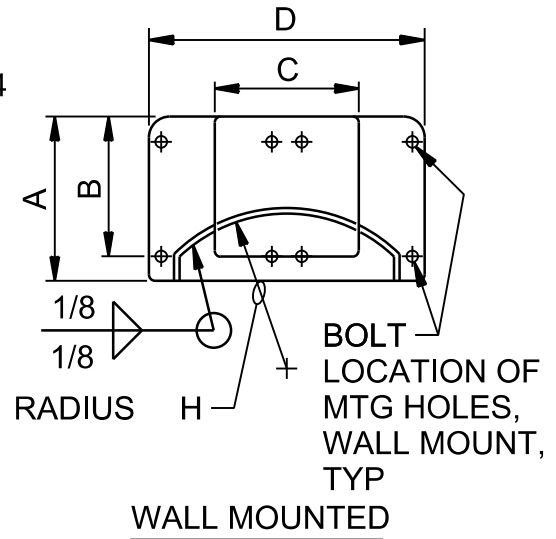
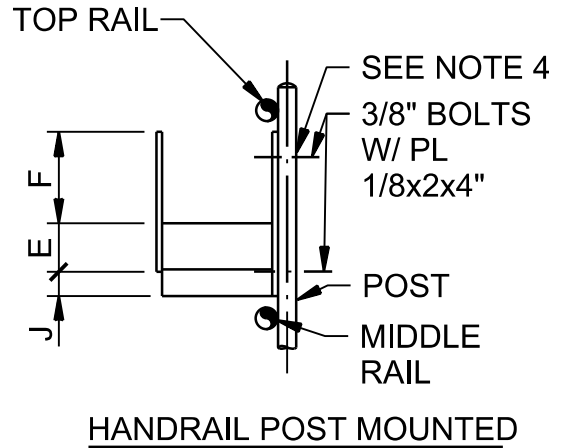
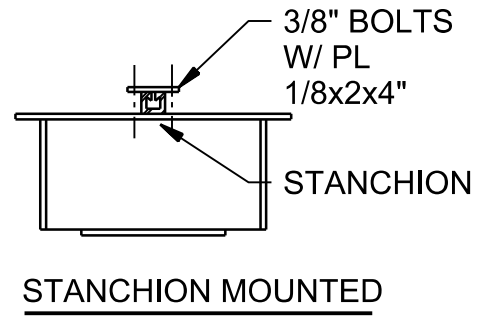
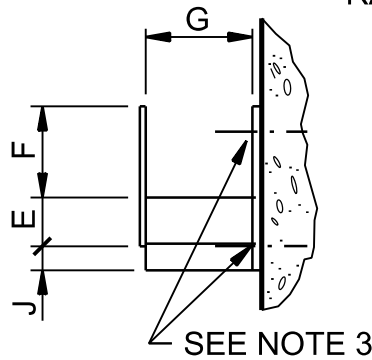
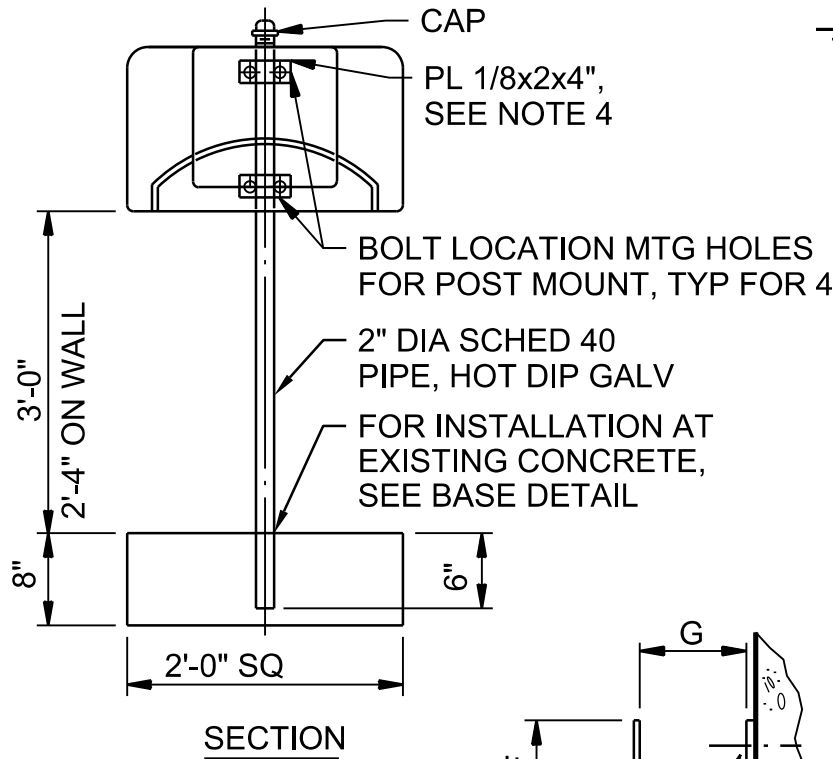
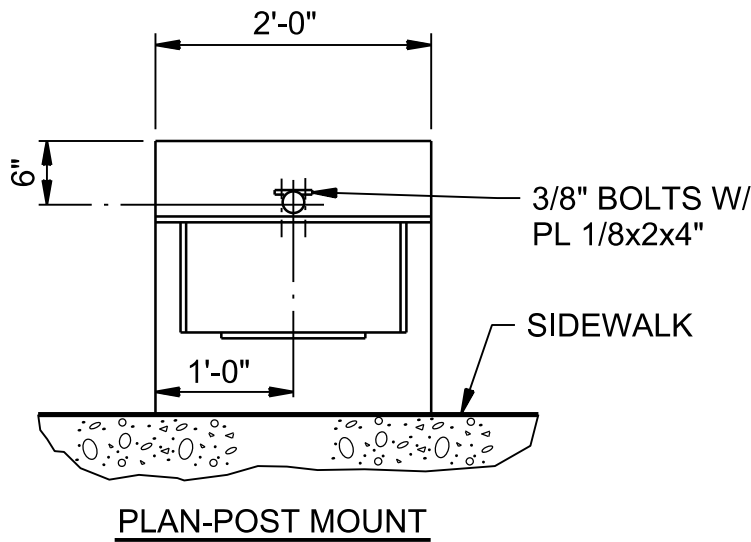


WALL PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

1334-010



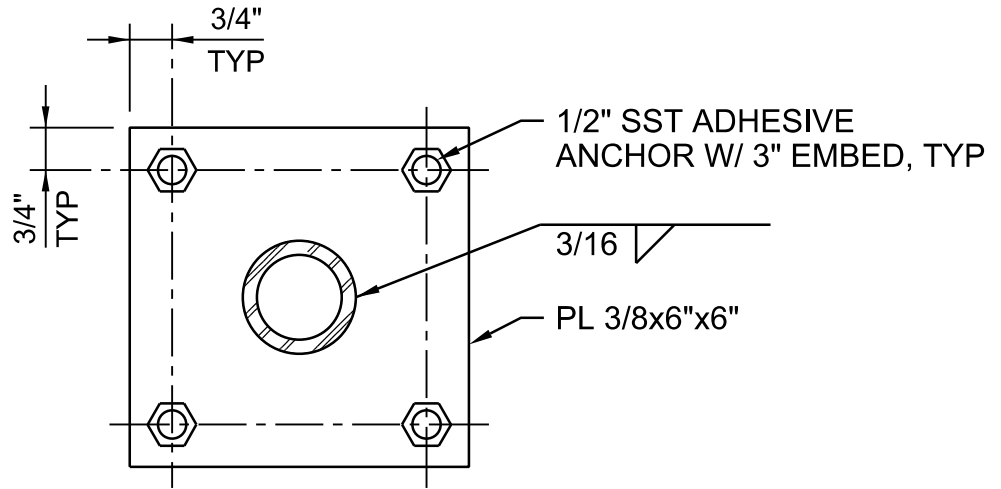
HOSE RACKS

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

DETAIL 1 OF 2

2210-720



BASE DETAIL

DIMENSION IN INCHES

RACK TYPE	DIMENSION IN INCHES								
	A	B	C	D	E	F	G	H	J
TYPE A-3/4" & 1" HOSE	10-1/2	9	9	18	3	6	7-1/2	9-3/4	1-1/2
TYPE B-1 1/2" HOSE	14	12	12	24	4	8	10	13	2

NOTES:

1. INTERIOR UNITS SHALL BE FABRICATED FROM 1/8" A-36 STEEL PLATE AND ENTIRE UNIT SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
2. EXTERIOR UNITS SHALL BE FABRICATED FROM 3/16" 6061-T6 ALUMINUM ALLOY PLATE.
3. ATTACH TO CONCRETE WALL WITH (4) - 3/8" STAINLESS STEEL STUD TYPE WEDGE ANCHORS.
4. ATTACH TO VERTICAL HANDRAIL OR INDIVIDUAL POST WITH PLATES AND (4)- 3/8" STAINLESS STEEL BOLTS.
5. ATTACH TO STEEL COLUMN WITH (4)- 3/8" ROUND HEAD BOLTS, ONE IN EACH CORNER. INSERT DOUBLE SPACER NUTS BETWEEN COLUMN AND HOSE RACK.

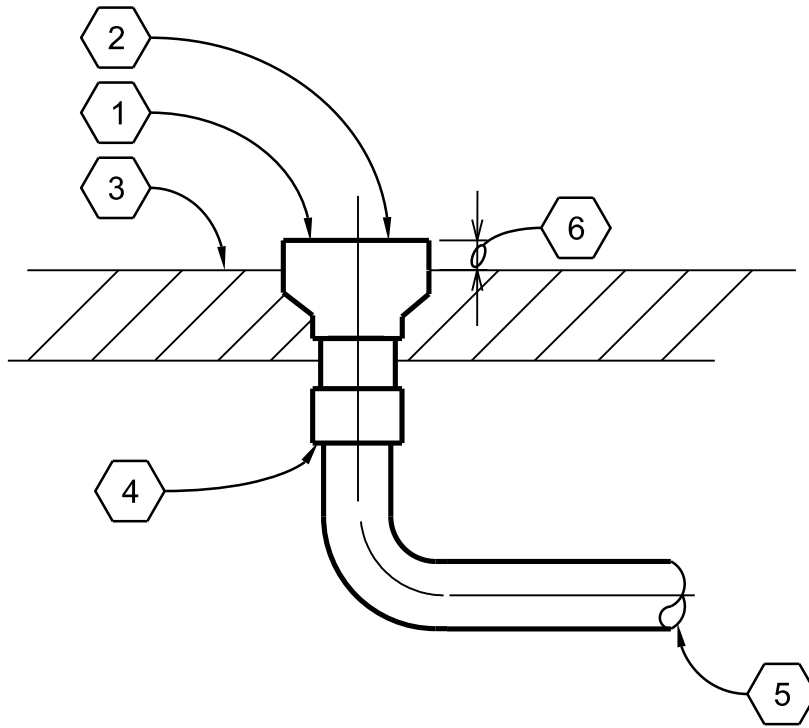
HOSE RACKS

NTS

DETAIL 2 OF 2

2210-720

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON



- 1. FOR 2" HUB DRAIN USE 2" x 3" REDUCER
FOR 3" HUB DRAIN USE 3" x 4" REDUCER
FOR 4" HUB DRAIN USE 4" x 6" REDUCER
- 2. HUB DRAIN
- 3. FINISH FLOOR
- 4. COUPLING
- 5. PIPE SIZE AS SHOWN ON THE DRAWINGS.
- 6. 2" ABOVE FINISH FLOOR

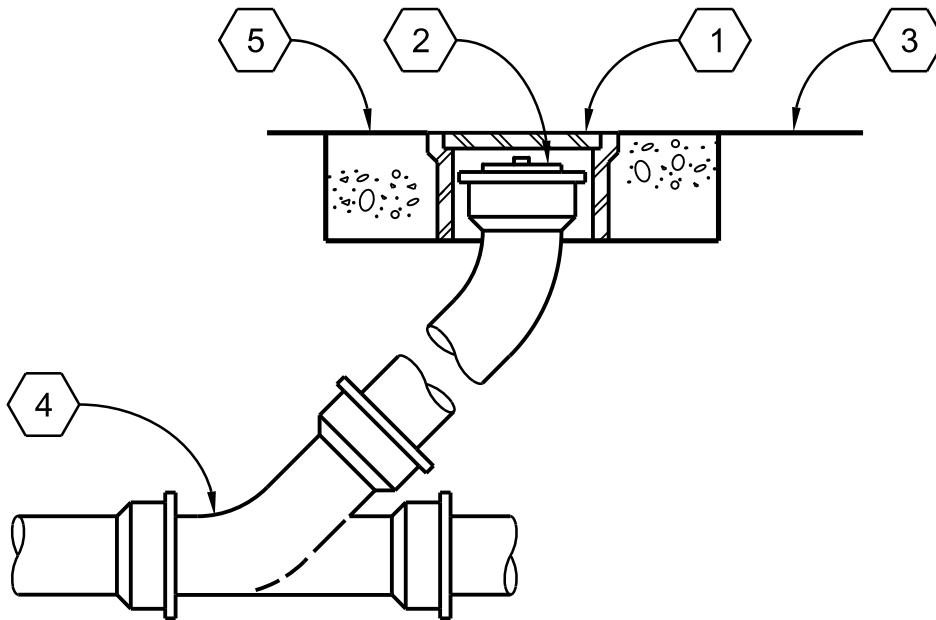
HUB DRAIN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2240-100

1. CLEANOUT BOX WITH CI COVER MARKED "CO".
2. CLEANOUT FITTING
3. FINISH GRADE
4. BEND OR WYE, AS REQUIRED.
5. 1'-6" X 1'-6" X 6" CONCRETE PAD.

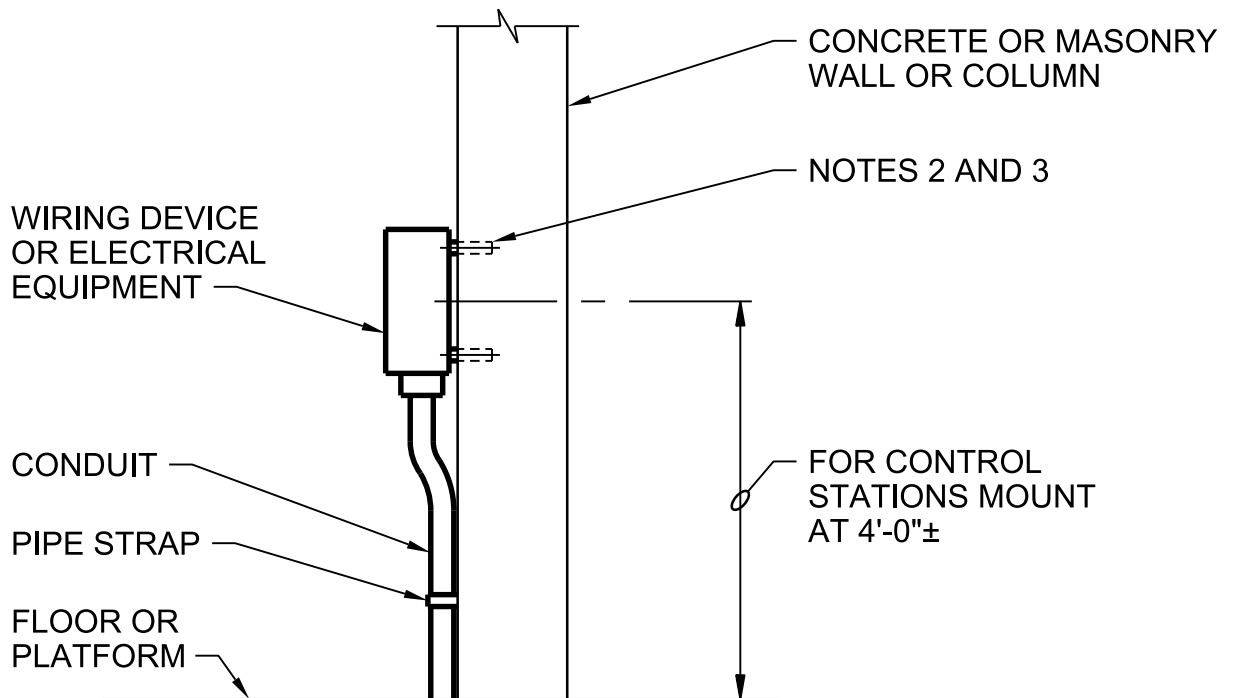


EXTERIOR CLEANOUT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2240-101



NOTES:

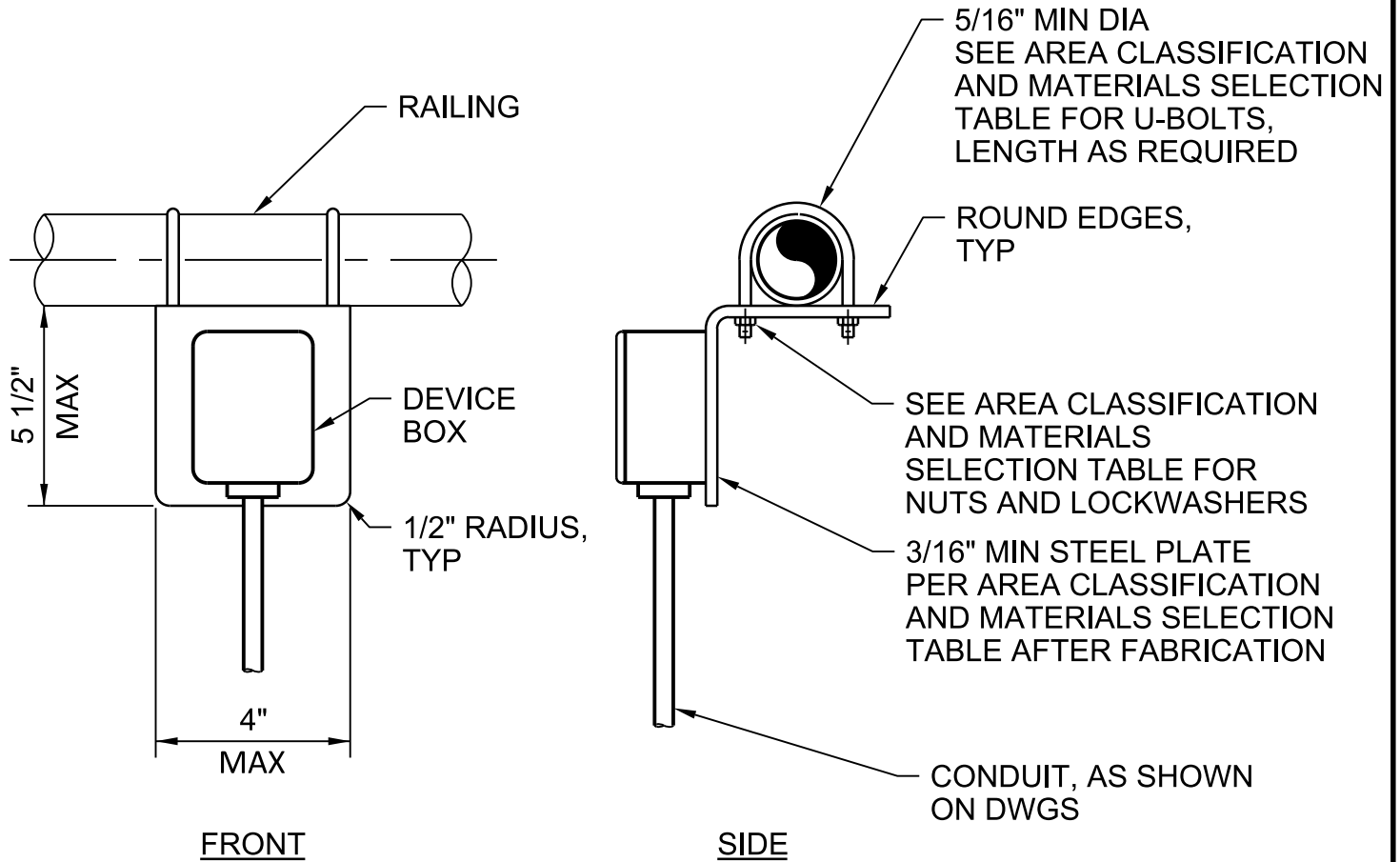
1. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL. USE BOTH WASHER AND LOCK WASHERS UNDER ALL NUTS.
2. ON CONCRETE WALLS USE STAINLESS STEEL CONCRETE ANCHORS. MOUNT ENCLOSURE ON SPACERS OF MIN 1/2" SCHEDULE 80 PVC CONDUIT.
3. BOXES 6 INCHES SQUARE AND SMALLER SHALL BE SUPPORTED BY TWO ANCHORS, MIN. LARGER BOXES SHALL BE SUPPORTED AS REQUIRED BY CALCULATION; FOUR ANCHORS MIN.
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

DEVICE MOUNTING, WALL OR COLUMN

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-002



NOTES:

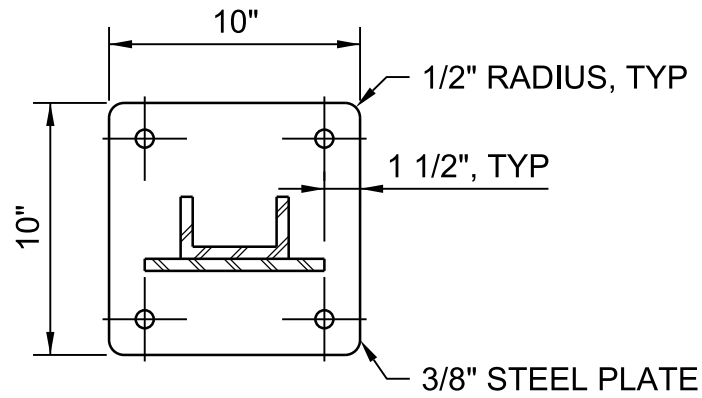
1. AT ALUMINUM RAILING, PROVIDE PROTECTION FOR ALUMINUM IN CONTACT WITH STEEL MEMBERS AND CONNECTIONS PER SPECIFICATIONS.

DEVICE MOUNTING, AT RAILING

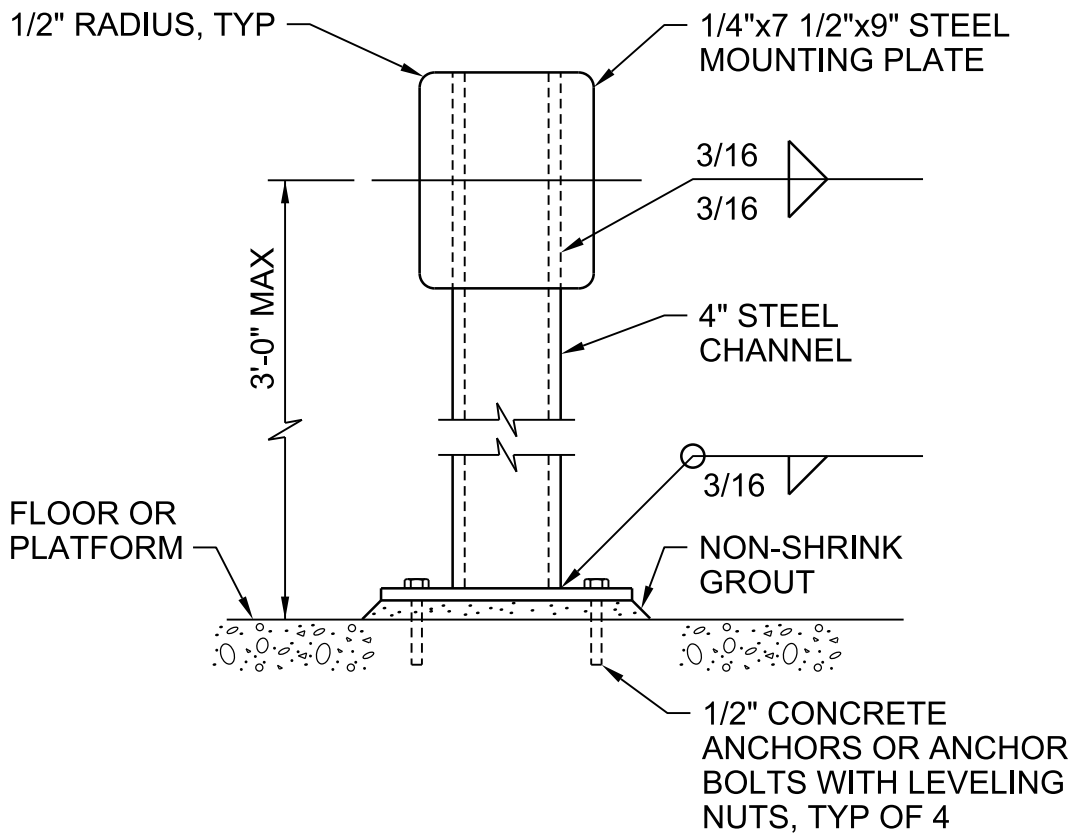
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-004



PLAN



ELEVATION

NOTES:

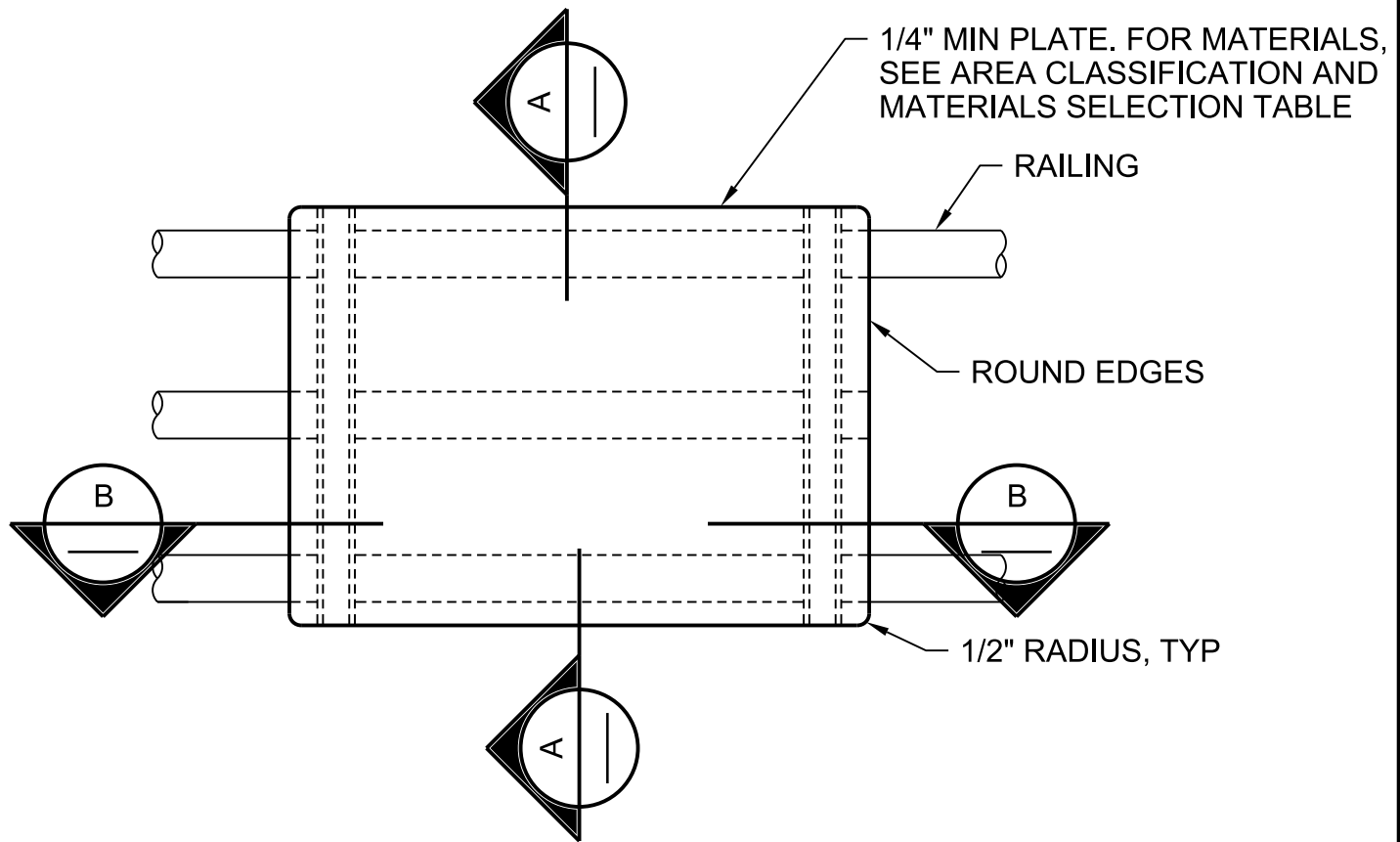
1. SEE AREA CLASSIFICATION AND MATERIALS SELECTION TABLE FOR ASSEMBLY AFTER FABRICATION.
2. SEE AREA CLASSIFICATION AND MATERIALS SELECTION TABLE FOR MOUNTING HARDWARE. USE WASHERS AND SPLIT-LOCK WASHERS UNDER ALL NUTS AND BOLTS.

DEVICE MOUNTING, CONTROL STATION PEDESTAL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-005a



ELEVATION

NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL. USE WASHERS AND LOCK WASHERS ON ALL NUTS AND BOLTS.
2. DIMENSIONS SHALL BE AS REQUIRED FOR EQUIPMENT TO BE MOUNTED. EDGE OF MOUNTING PLATE SHALL EXTEND A MINIMUM OF 2 INCHES EACH SIDE OF THE MOUNTED EQUIPMENT.
3. THIS DETAIL SHALL BE USED FOR MOUNTING EQUIPMENT AND JUNCTION BOXES WEIGHING LESS THAN 50 LBS ON RAILING WHETHER DETAIL IS CALLED OUT OR NOT. EQUIPMENT MOUNTING SHALL NOT REDUCE THE WIDTH OF A WALKWAY TO LESS THAN 3'-0".
4. COORDINATE EQUIPMENT LOAD WITH RAILING MANUFACTURER.
5. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

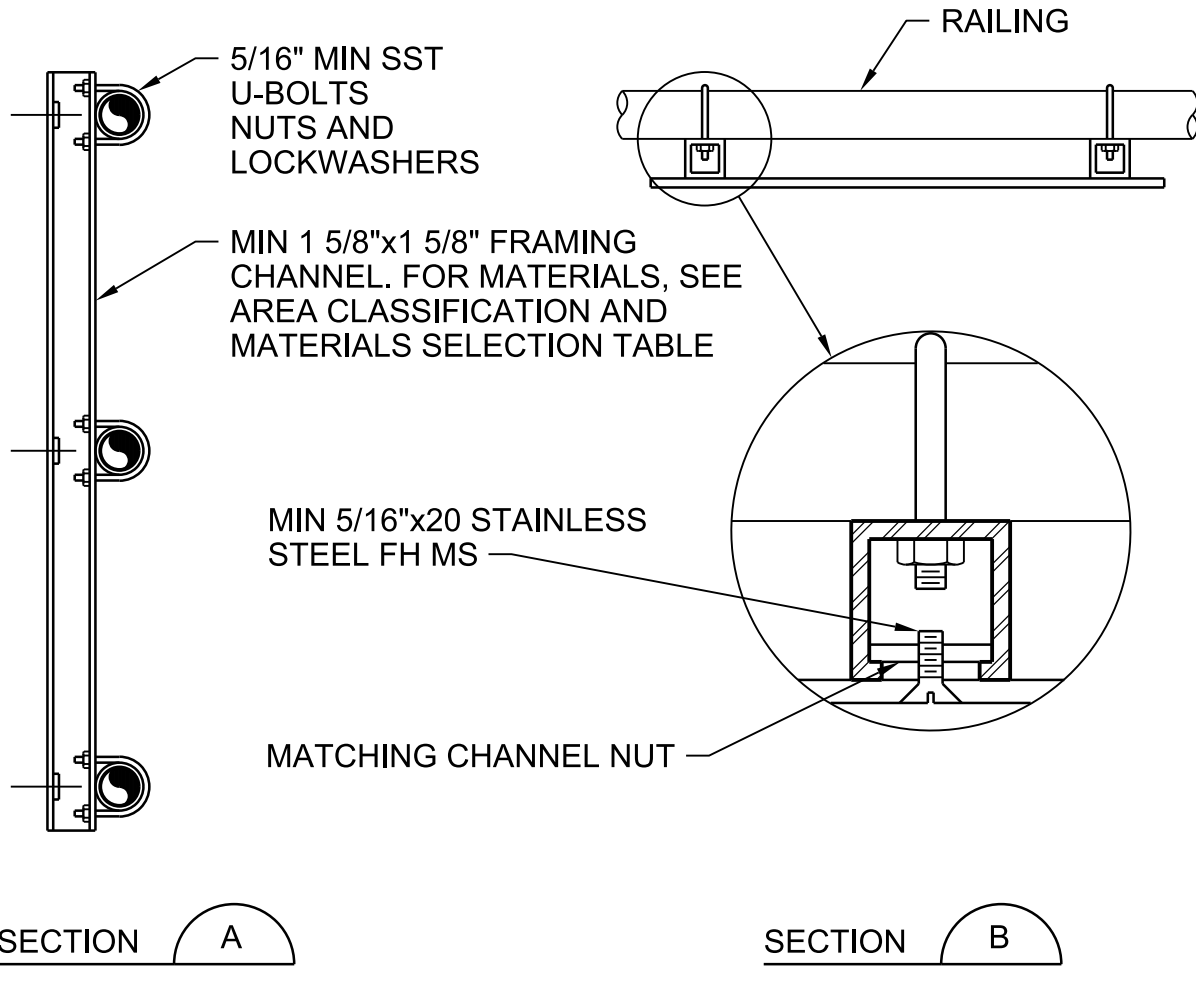
DEVICE MOUNTING,
RAILING MOUNTED EQUIPMENT SUPPORT

NTS

DETAIL 1 OF 2

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-007



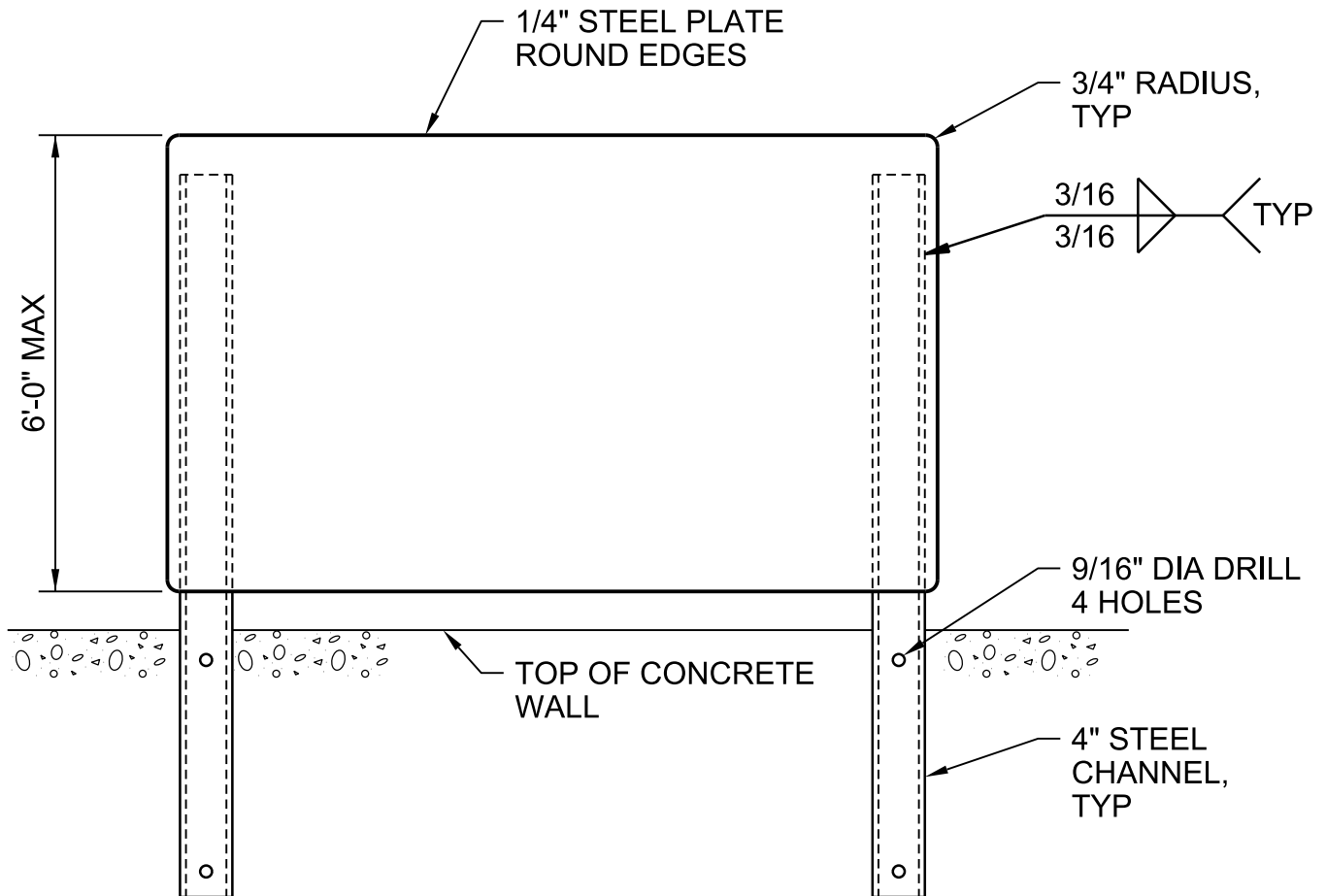
DEVICE MOUNTING,
RAILING MOUNTED EQUIPMENT SUPPORT

NTS

DETAIL 2 OF 2

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-007

**NOTES:**

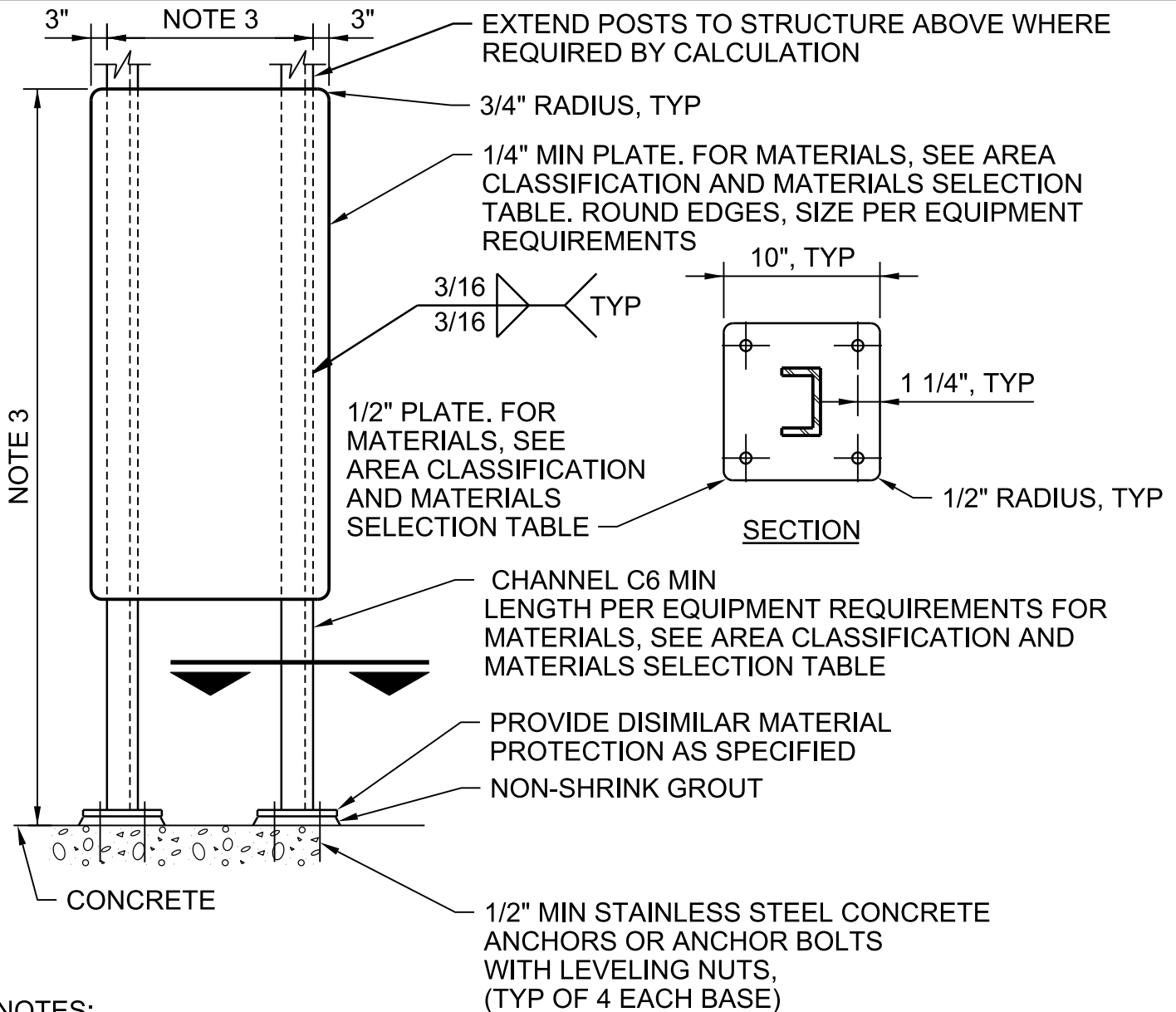
1. DIMENSIONS SHALL BE AS SHOWN ON DRAWINGS.
2. FOR MATERIALS, SEE AREA CLASSIFICATION AND MATERIALS SELECTION TABLE AFTER FABRICATION.
3. FOR HEIGHTS EXCEEDING 5'-0" OR WEIGHT OF MOUNTED EQUIPMENT EXCEEDING 200 LBS, SIZE POSTS AND CONNECTIONS FOR LATERAL LOADS. EXTEND POSTS TO STRUCTURE ABOVE WHERE REQUIRED BY CALCULATION. SEE GENERAL ELECTRICAL CONSTRUCTION NOTES ON DRAWINGS.

DEVICE MOUNTING, PULLBOX PEDESTAL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-008a



NOTES:

1. USE STAINLESS STEEL MOUNTING HARDWARE. USE WASHER AND SPLIT LOCK WASHER UNDER ALL NUTS.
2. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
3. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

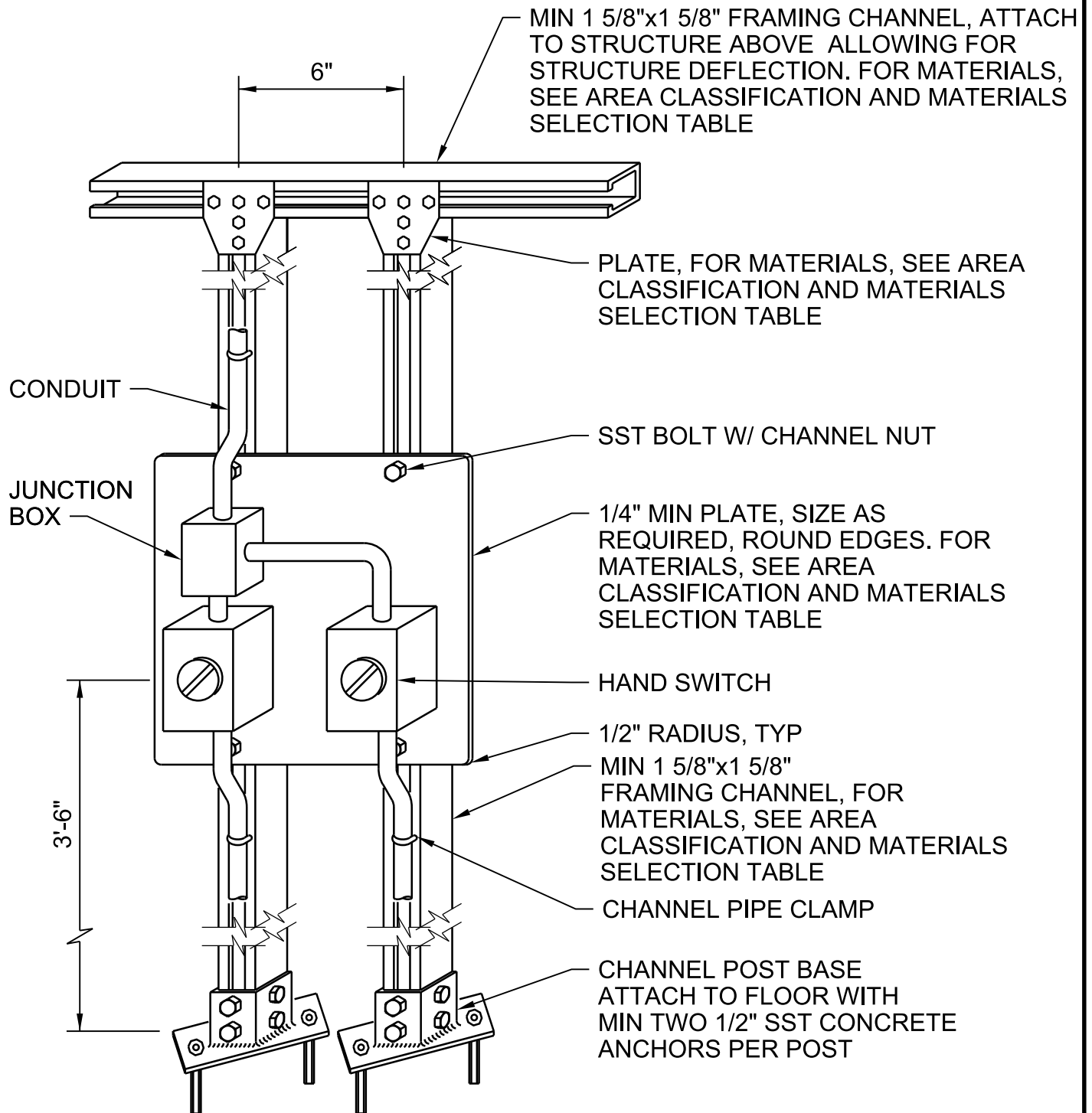
DISCONNECT, DEVICE MOUNTING, CONTROL

STATION PEDESTAL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-008b



NOTES:

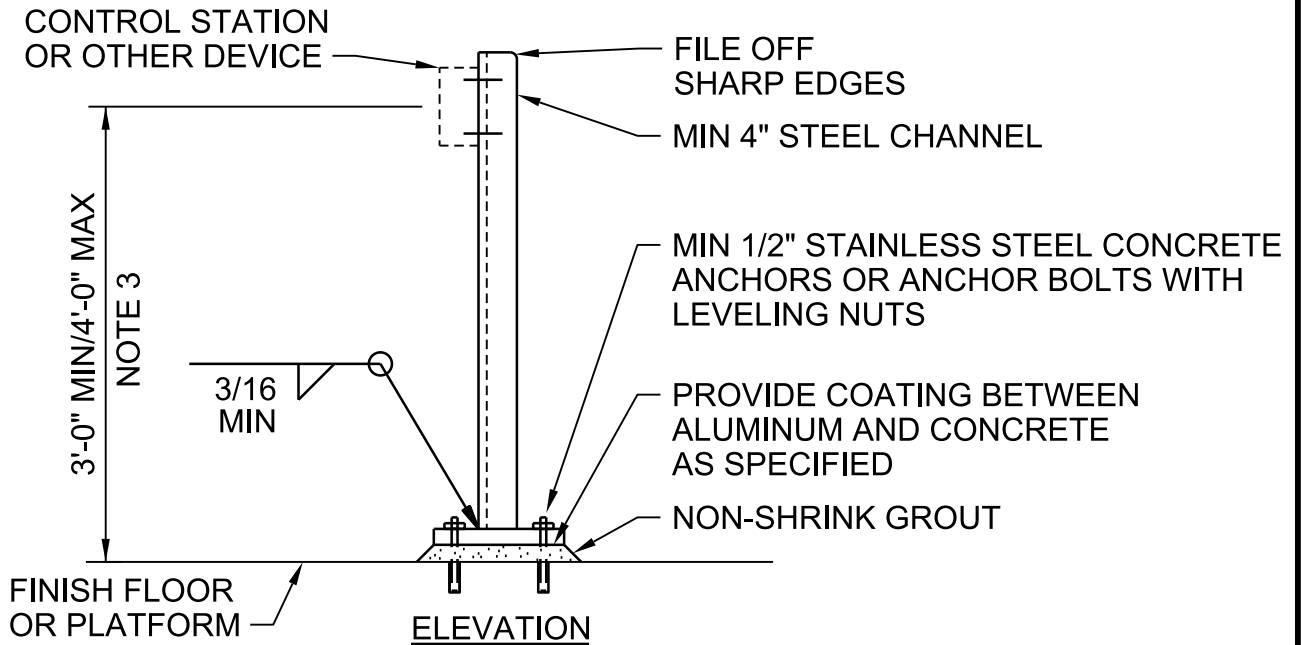
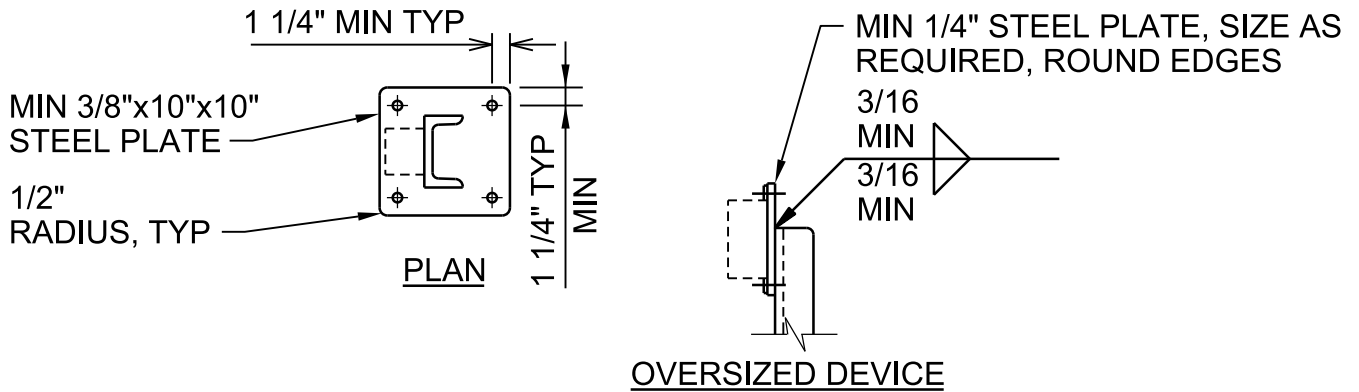
1. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

DEVICE MOUNTING, FROM FLOOR

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-009a



NOTES:

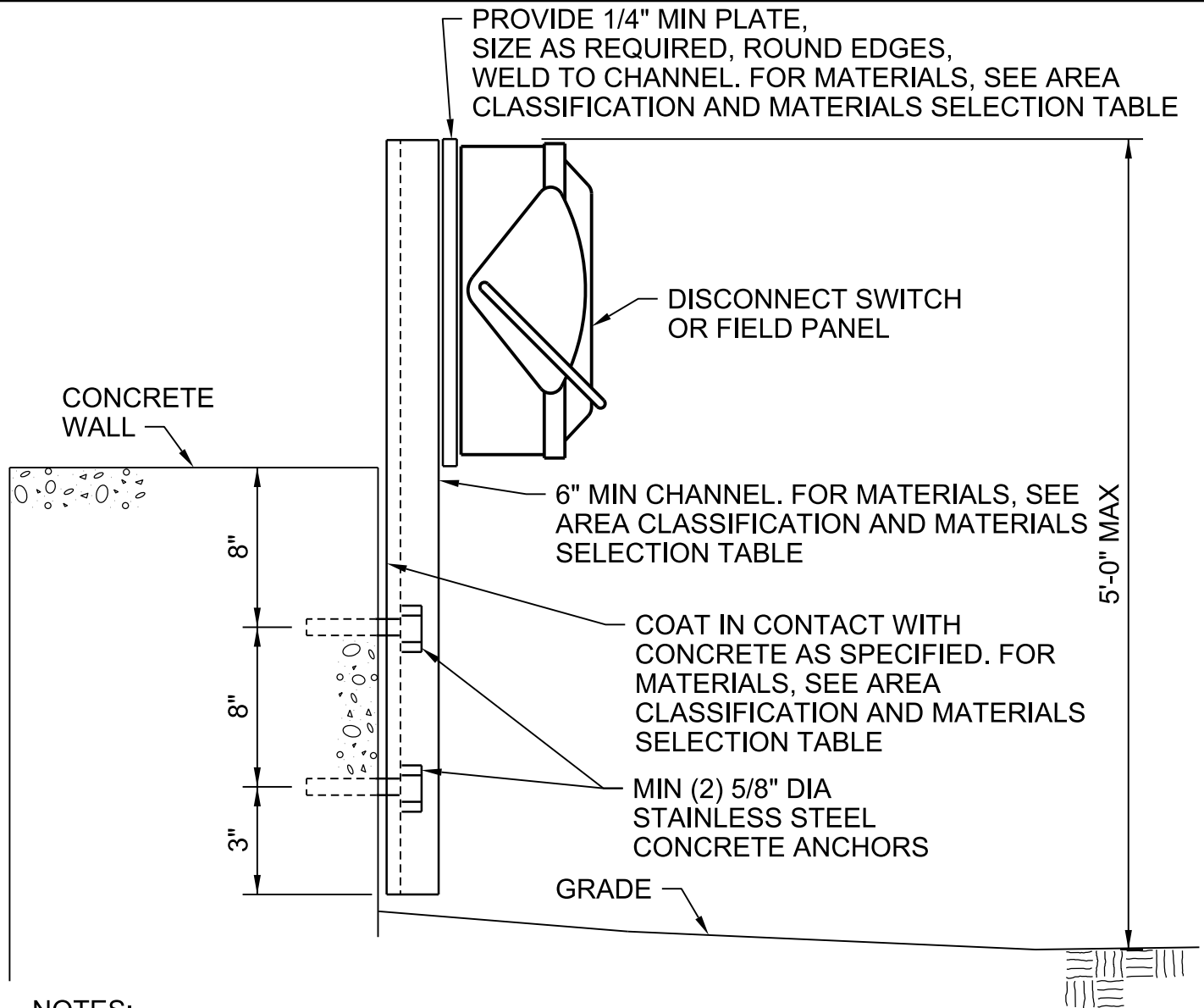
1. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL. USE WASHERS AND LOCK WASHERS UNDER ALL NUTS AND BOLTS.
2. EXTEND POSTS TO STRUCTURE ABOVE WHERE REQUIRED BY CALCULATION. EXTENSION SHALL ACCOMODATE DEFLECTION OF THE SUPPORTING STRUCTURE
3. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
4. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
5. SEE AREA CLASSIFICATION AND MATERIALS SELECTION TABLE FOR MATERIALS FOR ASSEMBLY AFTER FABRICATION.

DEVICE MOUNTING, PEDESTAL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-011a

**NOTES:**

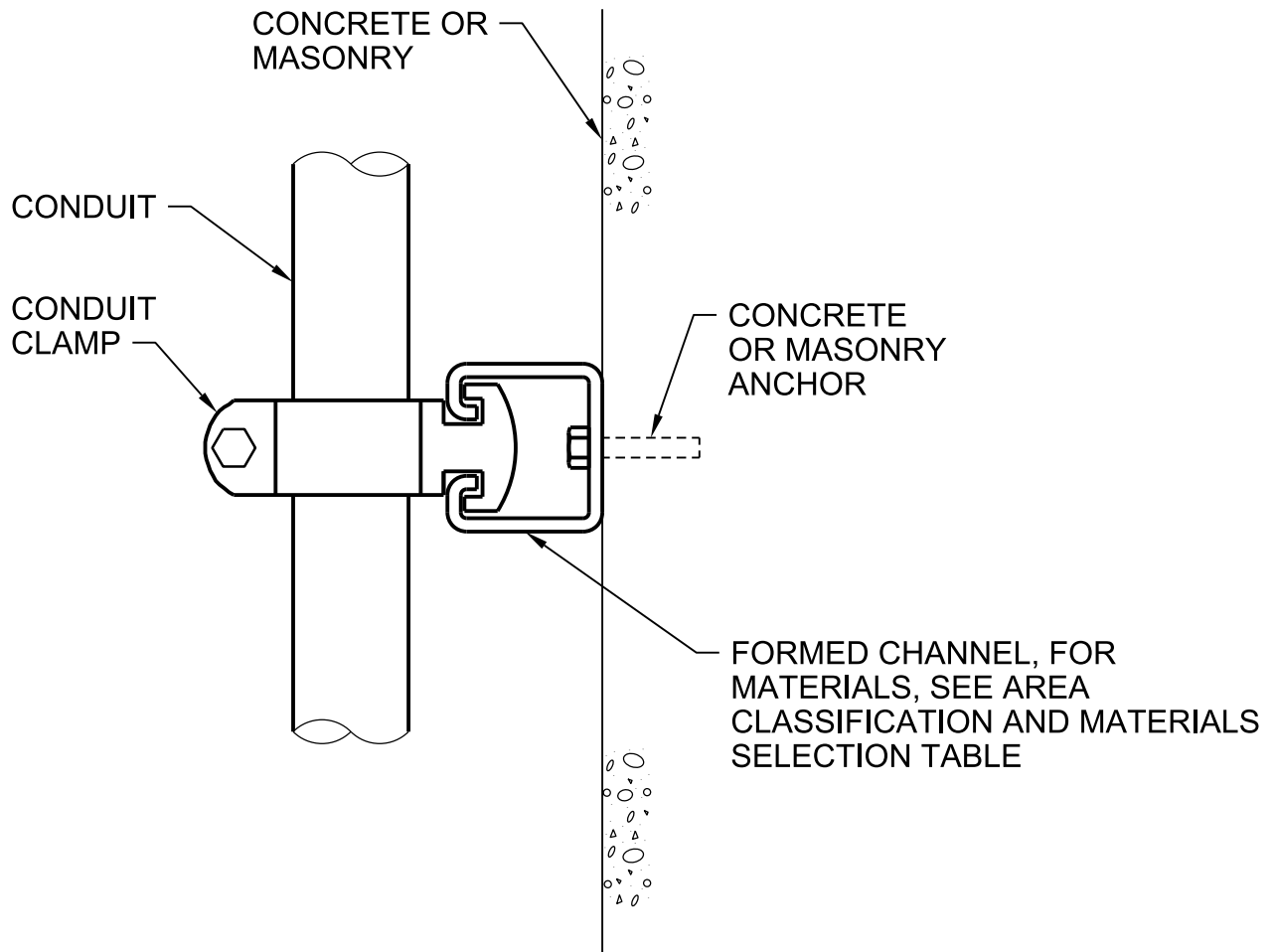
1. EQUIPMENT HAVING A FRONTAL AREA GREATER THAN 3 SQUARE FEET OR WIDER THAN 18 INCHES SHALL BE SUPPORTED BY MIN 2 CHANNELS.
2. USE STAINLESS STEEL MOUNTING HARDWARE. USE WASHER AND LOCK WASHERS UNDER ALL NUTS AND BOLTS.
3. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

DEVICE MOUNTING, PEDESTAL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-012



NOTES:

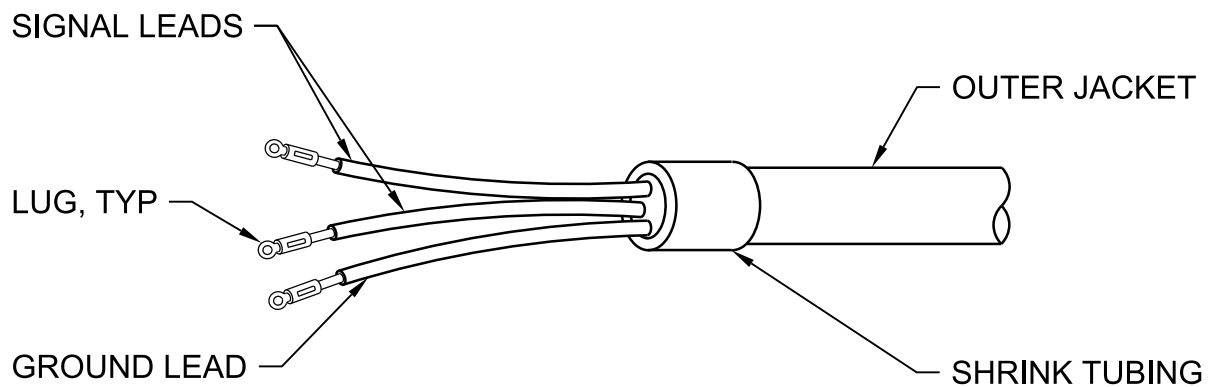
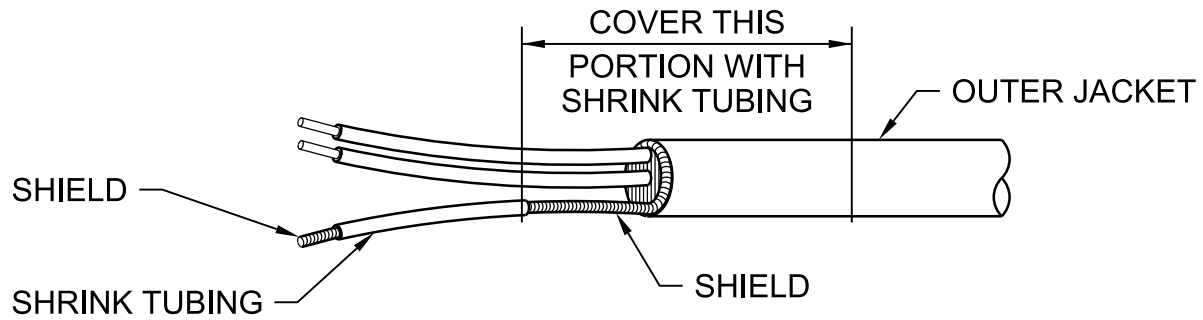
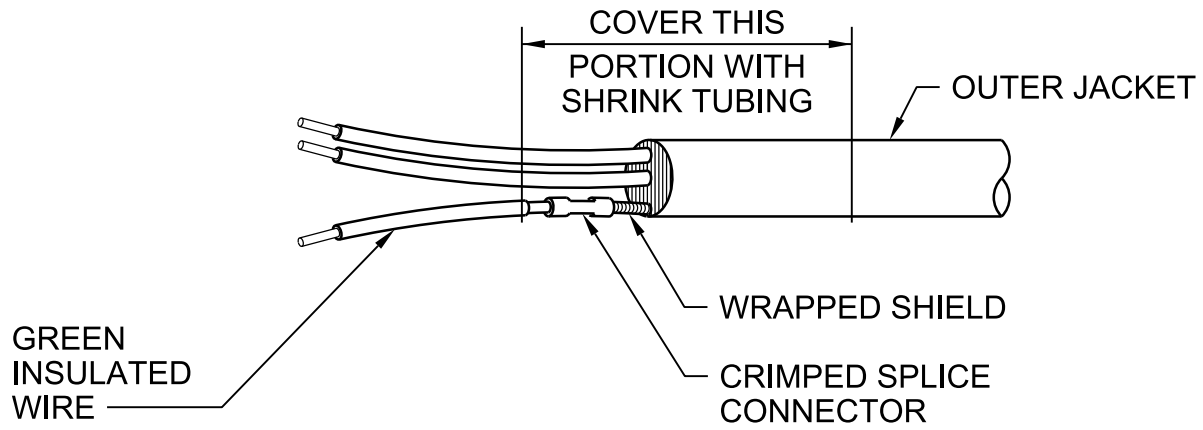
1. SUPPORT ALL EXPOSED CONDUITS ON FORMED STEEL CHANNELS.
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
3. AT MASONRY INSTALL ANCHORS AT GROUTED CELLS ONLY. FIELD LOCATE.

CONDUIT SUPPORT ON STRUCTURE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-017



NOTES:

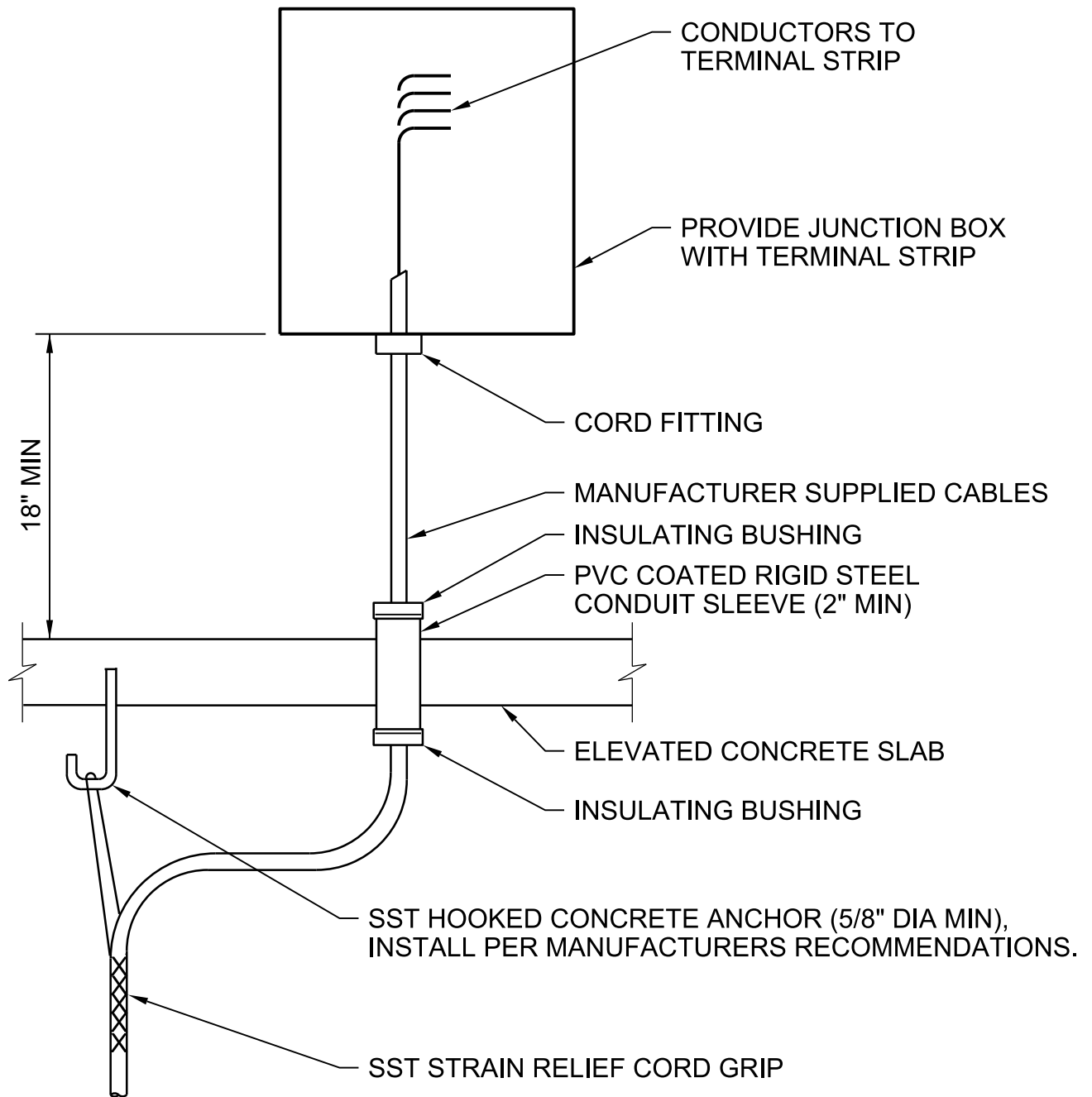
- 1. ALL SHIELDED INSTRUMENTATION CABLE SHALL BE TERMINATED IN ACCORDANCE WITH THIS DETAIL WHERE GROUNDING IS REQUIRED.

TERMINATION OF SHIELDED INSTRUMENTATION CABLE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-100b

**NOTES:**

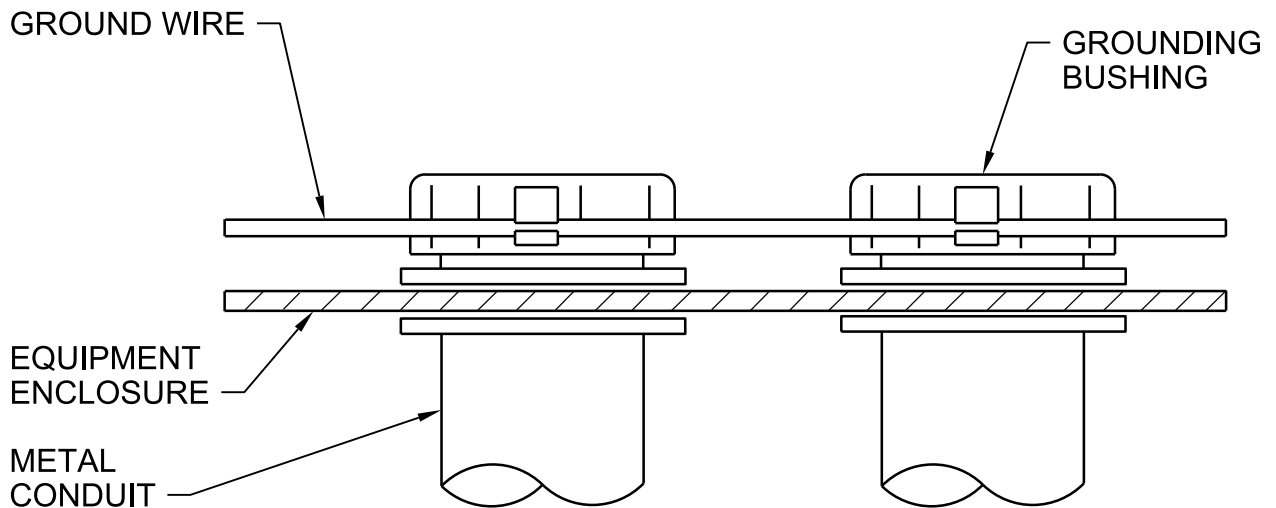
1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. THIS DETAIL SHALL BE USED FOR TERMINATION OF ALL MANUFACTURER SUPPLIED CABLES (MSC) EXITING A WET WELL IF NO OTHER DETAIL IS CALLED OUT ON THE DRAWINGS.
3. FILL CONDUIT SLEEVE WITH EXPANDABLE SEALING COMPOUND.

MSC CABLE TERMINATION

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-101



NOTES:

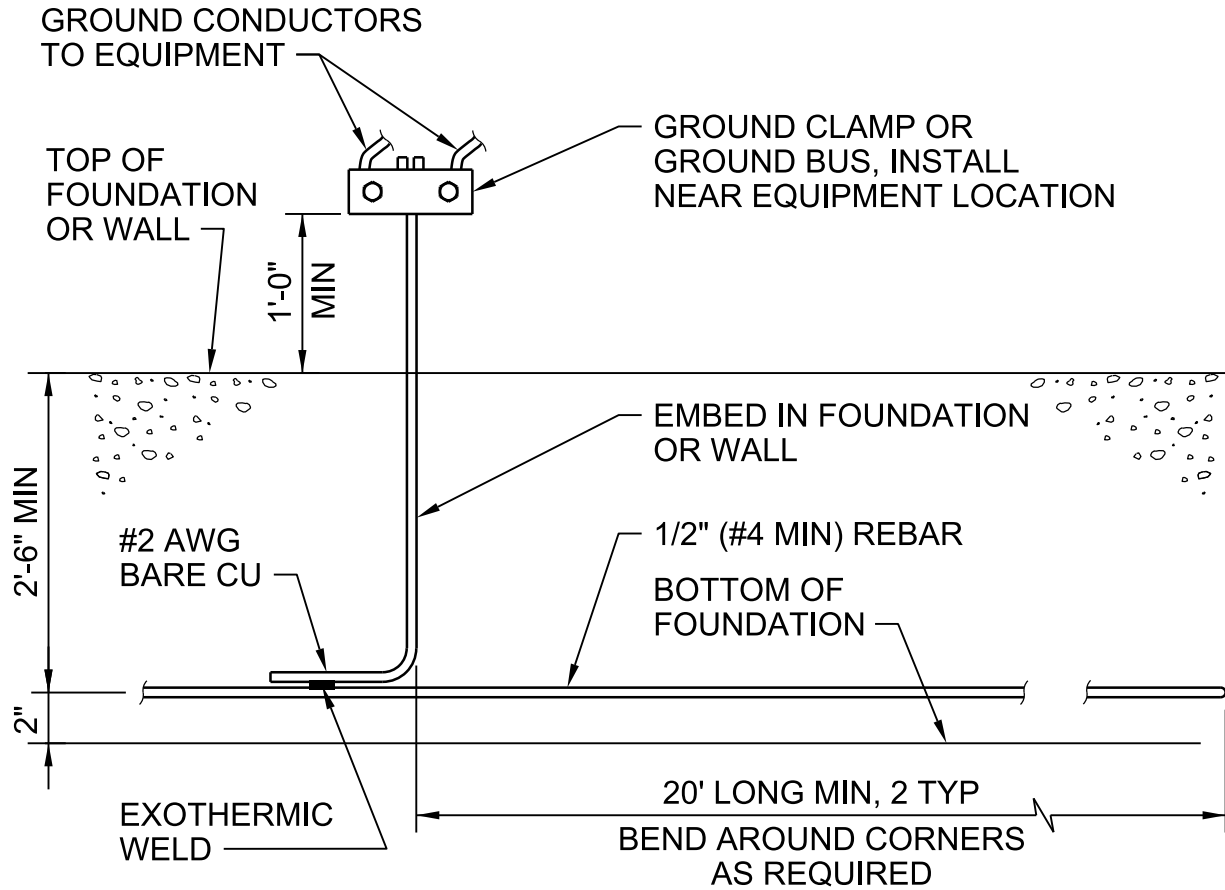
1. THE ENDS OF ALL CONDUITS REQUIRED TO BE GROUNDED BY THE SPECIFICATIONS SHALL BE GROUNDED IN ACCORDANCE WITH THIS DETAIL.

CONDUIT GROUNTING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-203



NOTES:

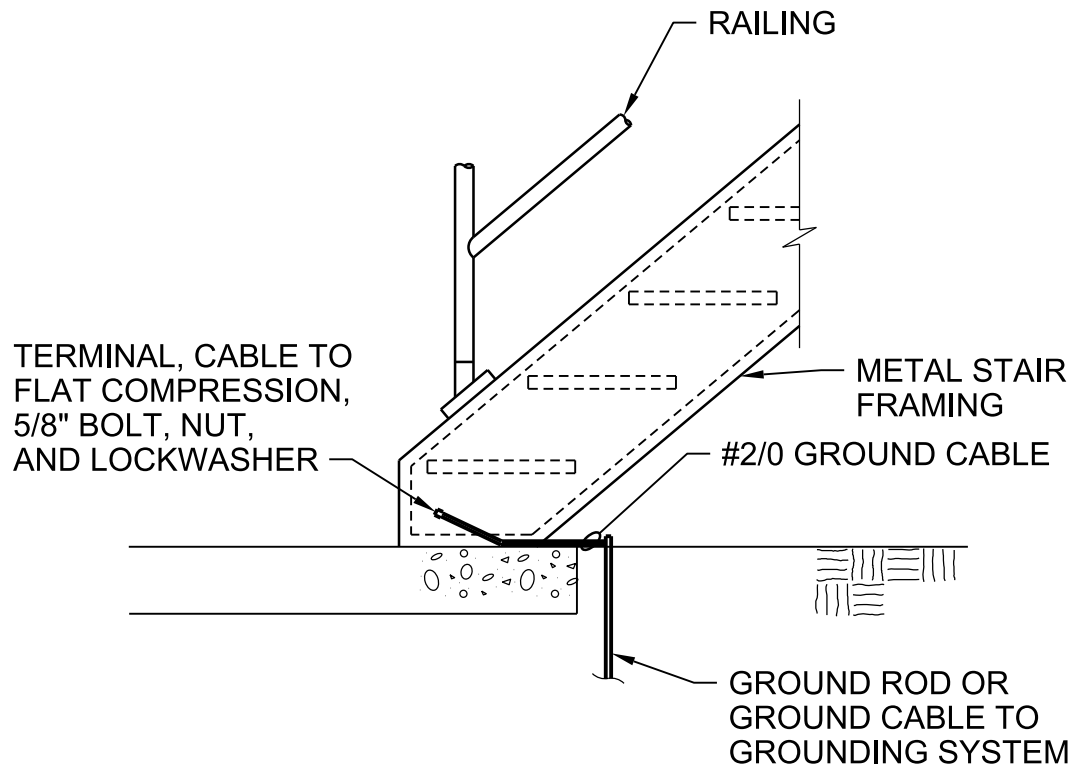
1. WHERE MULTIPLE INSTRUMENT SURGE SUPPRESSOR GROUNDS MUST BE CONNECTED IN ONE LOCATION, INSTALL A GROUND BUS.

GROUND ELECTRODE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-206

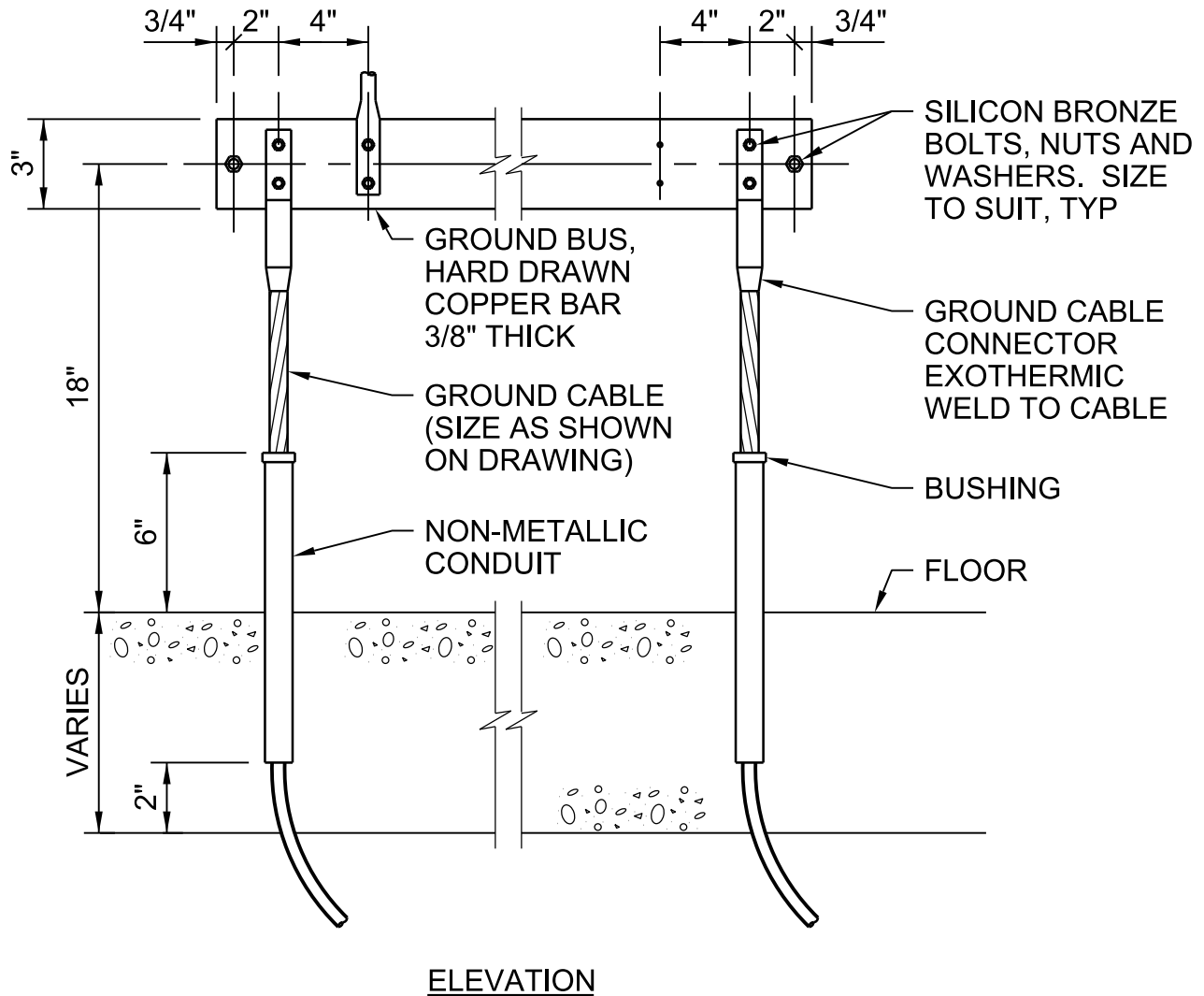
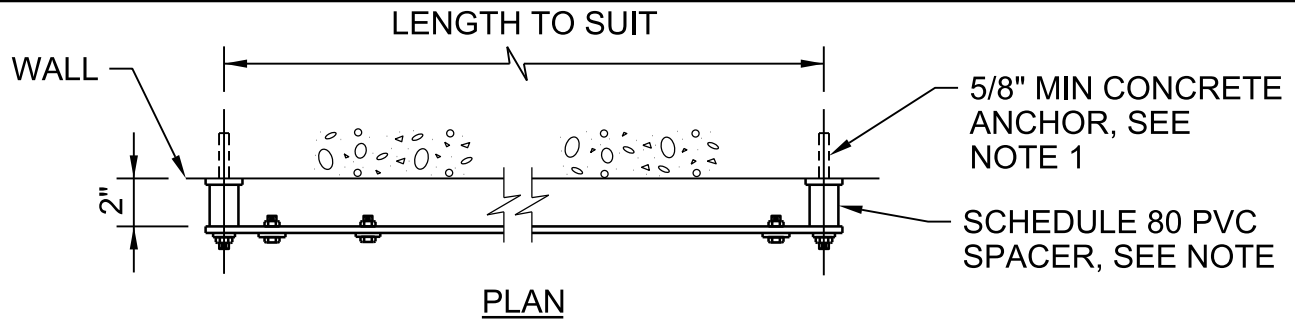


GROUNDING, GENERAL STAIRWAY

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-207



NOTES:

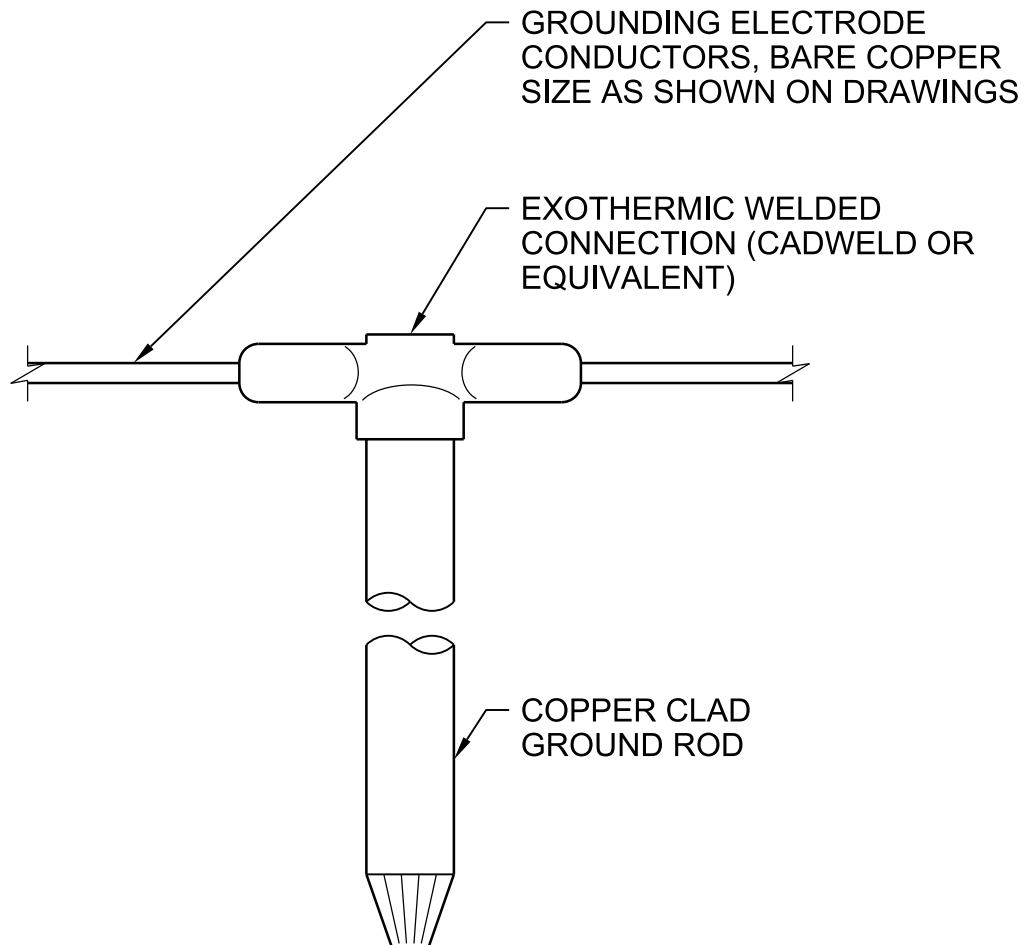
1. MAXIMUM SPAN BETWEEN SUPPORTS NOT TO EXCEED 24".

GROUND BUS

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-208

**NOTES:**

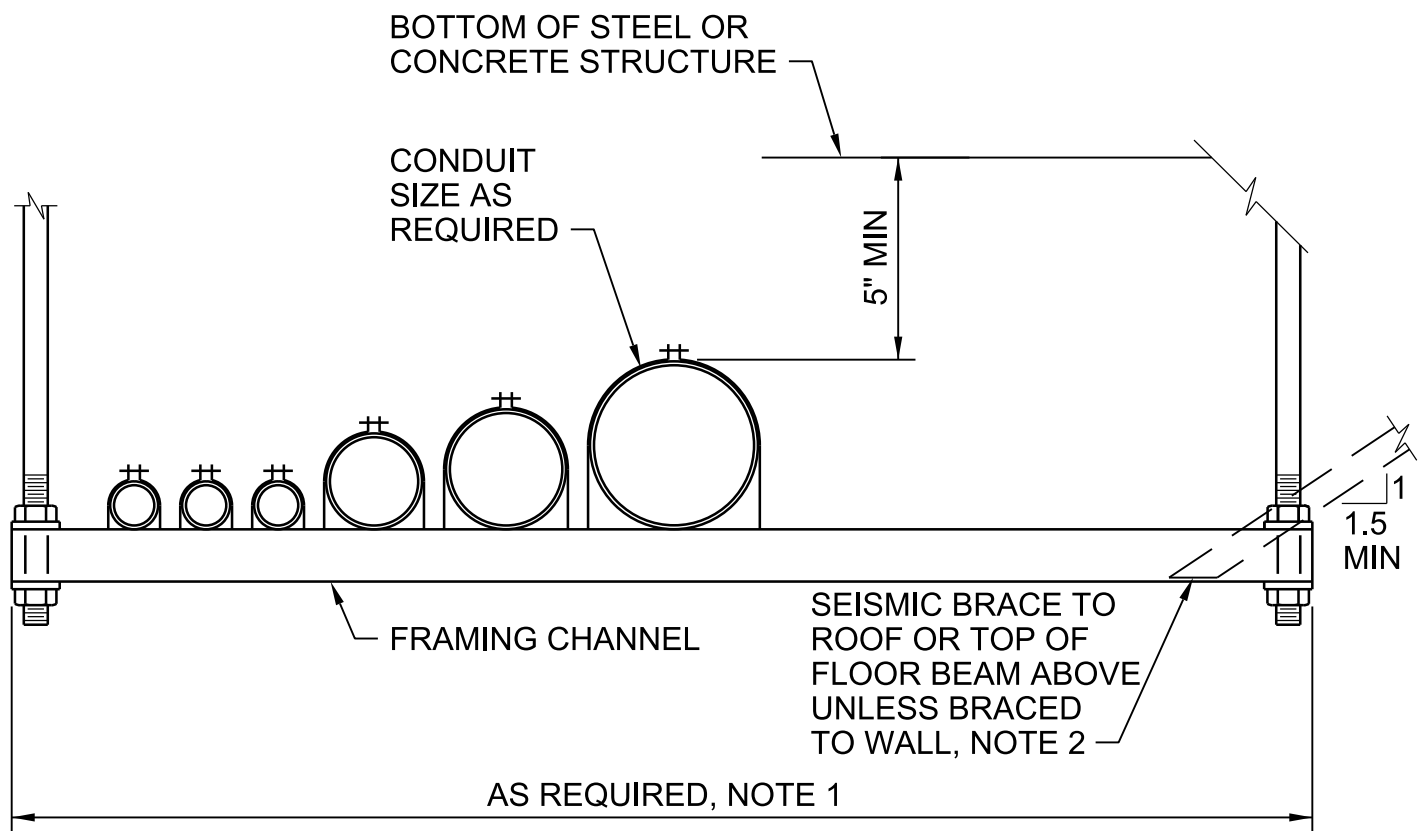
1. TOP OF GROUND ROD SHALL BE SAND BEDDED
6" MIN BELOW GRADE.
2. CONNECTIONS TO EXISTING GROUNDING
ELECTRODE CONDUCTORS SHALL
BE CADWELD OR EQUIVALENT.

GROUND ROD CONNECTION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-235



SINGLE RACK

NOTES:

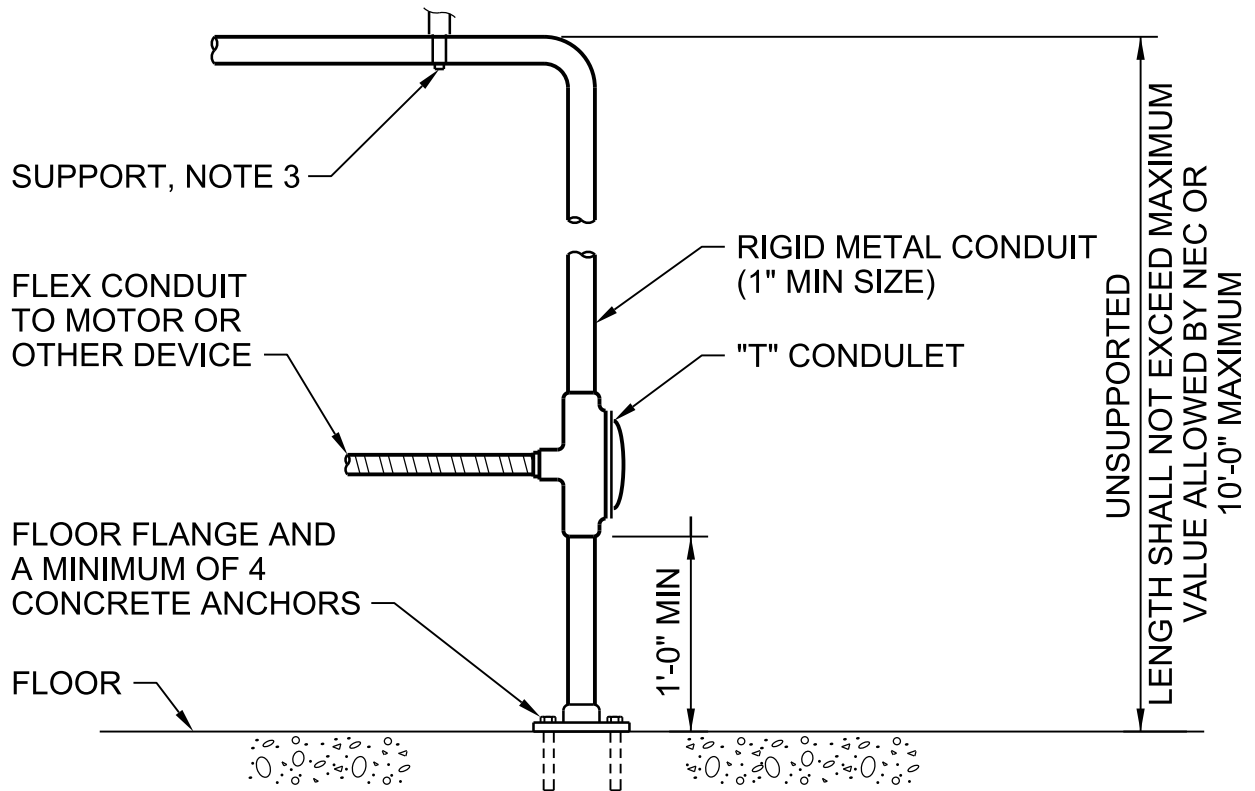
1. LENGTH VARIES WITH NUMBER OF CONDUITS TO BE SUPPORTED AND SPACING BETWEEN CONDUITS.
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
3. USE STAINLESS STEEL HARDWARE IN WET AND/OR CORROSIVE AREAS.
4. SPACE CONDUIT SUFFICIENTLY TO ALLOW REMOVAL OF ONE CONDUIT WITHOUT DISTURBING ADJACENT CONDUITS.

CONDUIT RACKING SYSTEM

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-300



NOTES:

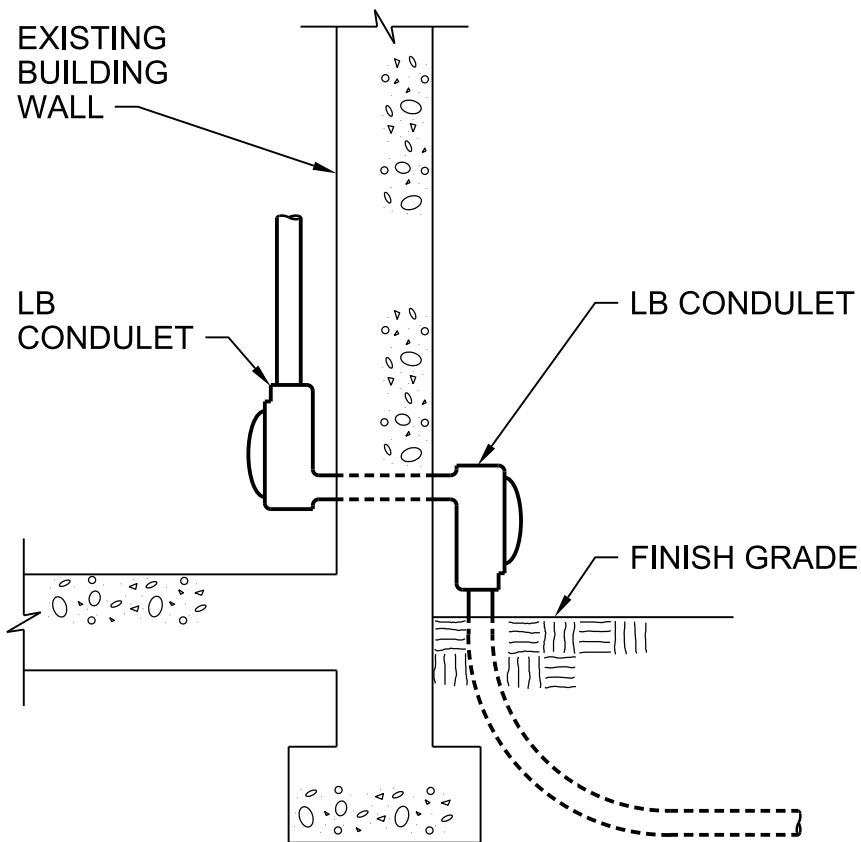
1. INSTALLATION OF CONDUIT TO A MOTOR OR OTHER DEVICE WHERE A FLEXIBLE CONNECTION IS REQUIRED AND NO JUNCTION BOXES OR CONTROL DEVICES ARE REQUIRED SHALL BE MADE IN ACCORDANCE WITH THIS DETAIL.
2. ALL HARDWARE SHALL BE STAINLESS STEEL.
3. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

CONDUIT TO EQUIPMENT FROM CEILING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-303



NOTES:

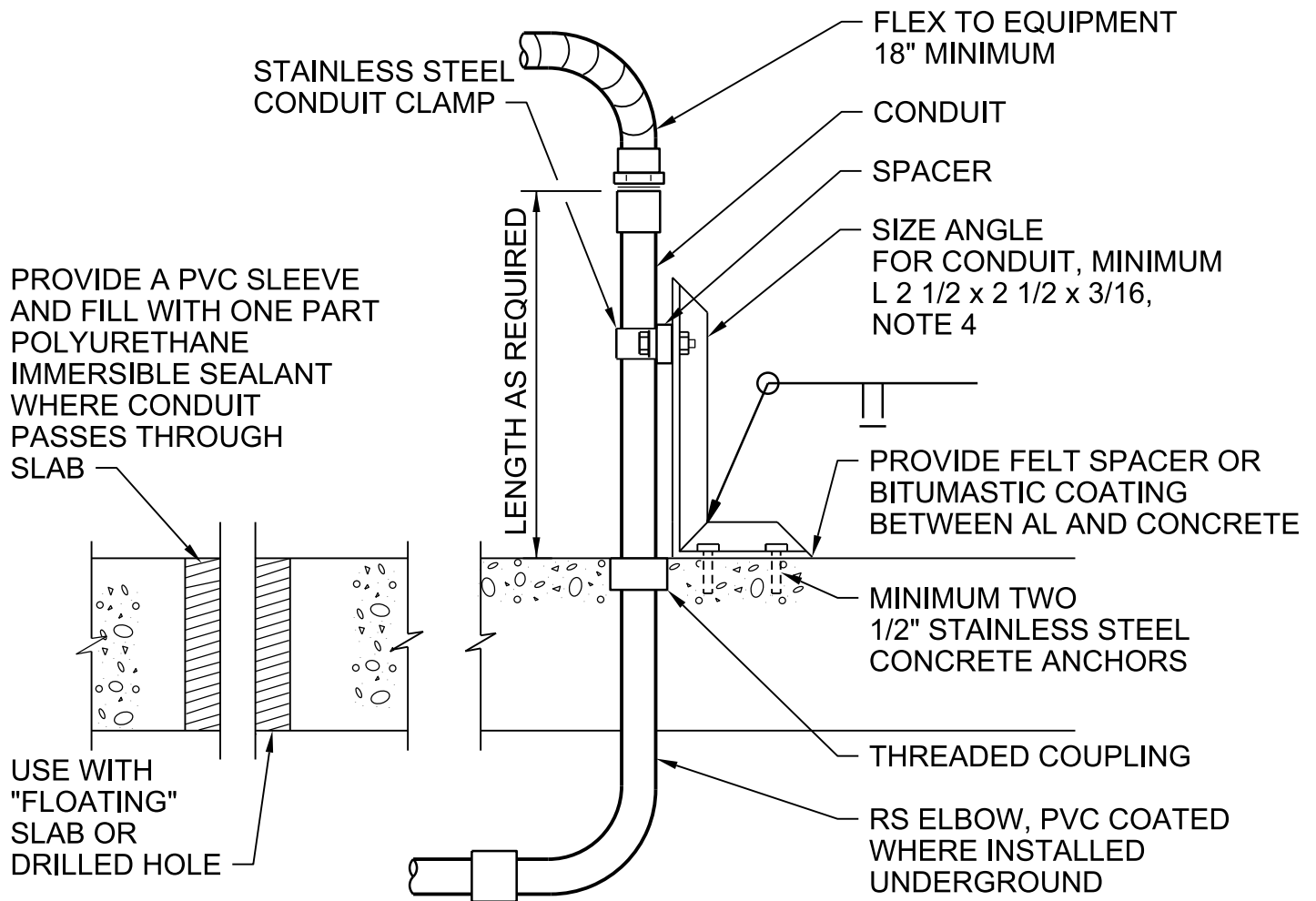
1. INSTALL CONDUITS THROUGH EXISTING WALLS IN ACCORDANCE WITH THIS DETAIL IF NOT OTHERWISE INDICATED.
2. DRILL HOLE USING METHODS THAT LEAVE A SMOOTH OPENING. SEAL OPENING AROUND CONDUIT, INSIDE, AND OUTSIDE, WITH ONE PART POLYURETHANE IMMERSIBLE SEALANT.

CONDUIT ENTRANCE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-304

**NOTES:**

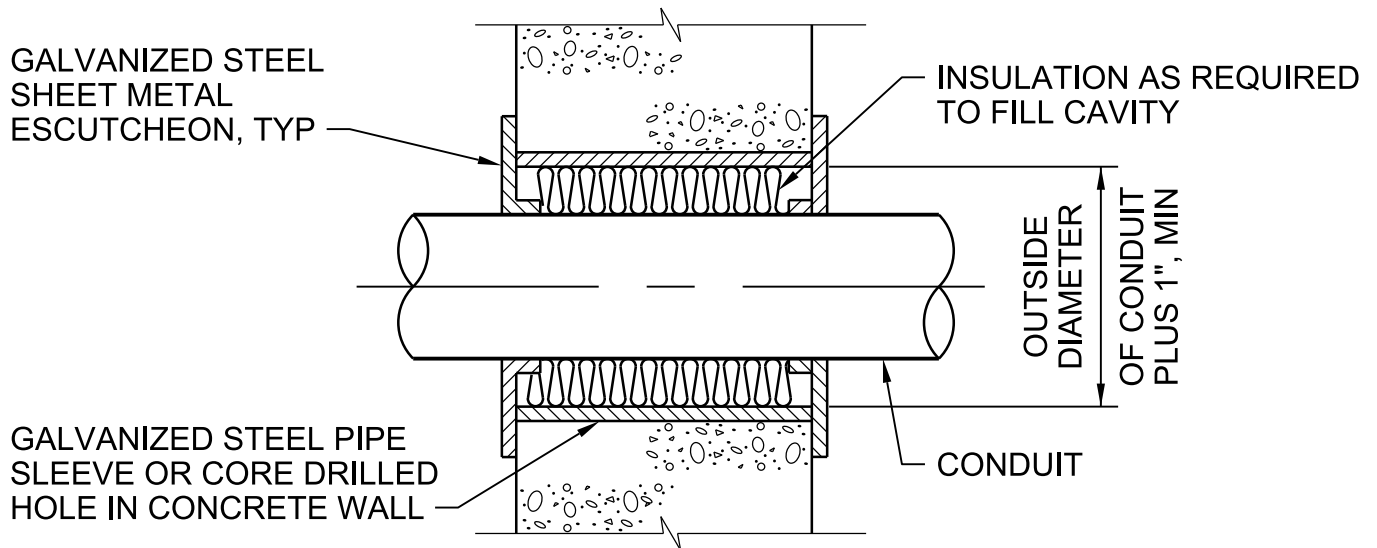
1. PROVIDE SUPPORT FOR ALL METAL CONDUITS WHICH EXTEND MORE THAN 18 INCHES OUT OF THE SLAB WITHIN 3 INCHES OF THE END OF THE CONDUIT.
2. PROVIDE SUPPORT FOR ALL PVC CONDUIT WITHIN 3 INCHES OF THE END OF THE CONDUIT.
3. THIS DETAIL SHALL BE USED FOR SUPPORT OF ALL CONDUITS WHICH ARE NOT OTHERWISE SUPPORTED IN A RIGID MANNER SUCH AS AGAINST AN EQUIPMENT BASE, WALL, COLUMN, ETC, AS REQUIRED ABOVE.
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

CONDUIT TRANSITION AND SUPPORT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-305



NOTES:

1. CONDUITS WHICH INDIVIDUALLY PASS THRU AN INTERIOR WALL SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL. IF WALL IS A FIRE WALL, FILL CAVITY WITH FIRE STOP SEALANT AS SPECIFIED.

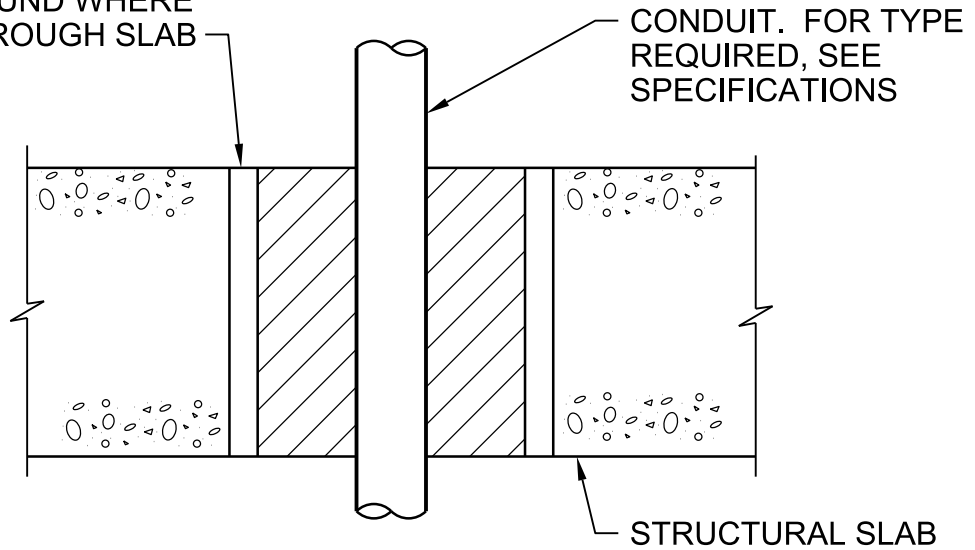
INTERIOR WALL PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-306

PROVIDE A PVC SLEEVE AND
FILL WITH A SUITABLE PLASTIC
EXPANDABLE COMPOUND WHERE
CONDUIT PASSES THROUGH SLAB



NOTES:

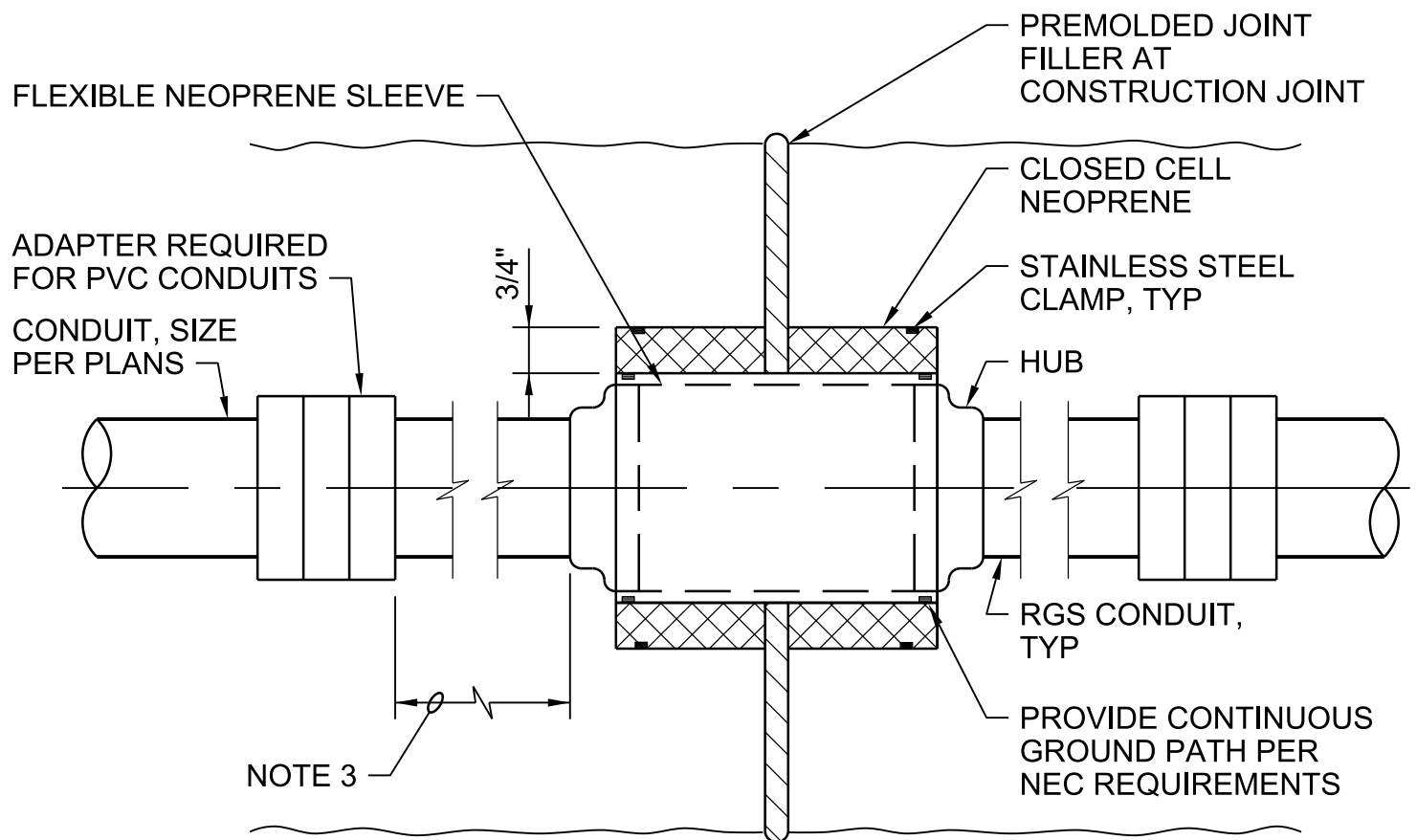
1. ALL CONDUITS THROUGH CONCRETE FLOOR SLABS AND EQUIPMENT PADS SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL.

INTERIOR FLOOR SLAB PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-310



NOTES:

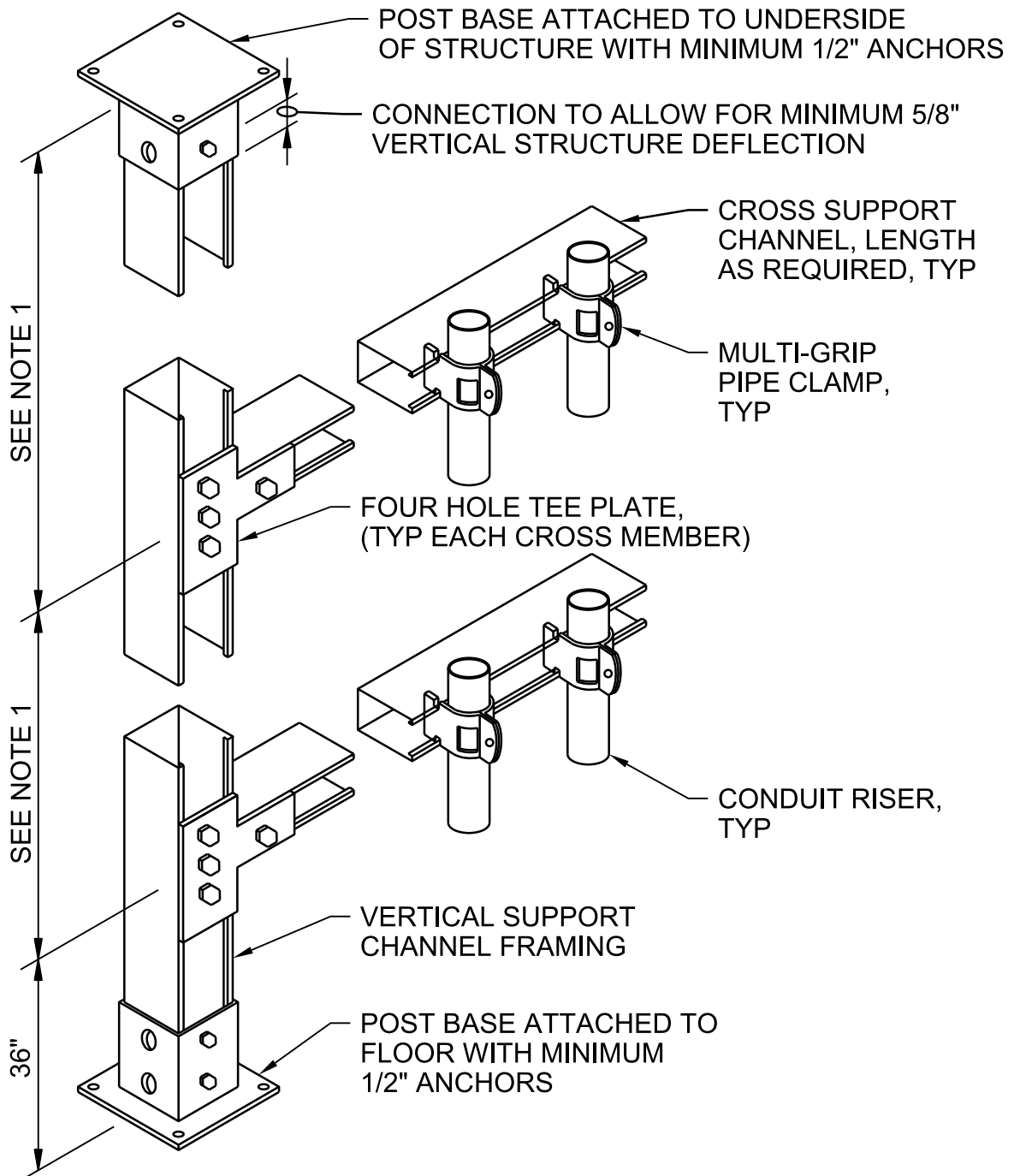
1. DETAIL APPLIES TO CONDUIT EMBEDDED IN STRUCTURAL CONCRETE AT BUILDING INTERFACES AND AT STRUCTURAL EXPANSION JOINTS.
2. DETAIL APPLIES TO ALL EXPANSION JOINTS FOR THE UNDERGROUND CONCRETE ENCASED CONDUITS.
3. PVC CONDUIT INSTALLATIONS SHALL HAVE 18 INCHES MIN LENGTH OF RGS CONDUIT EACH SIDE OF FITTING.

EXPANSION/DEFLECTION COUPLING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-315



NOTES:

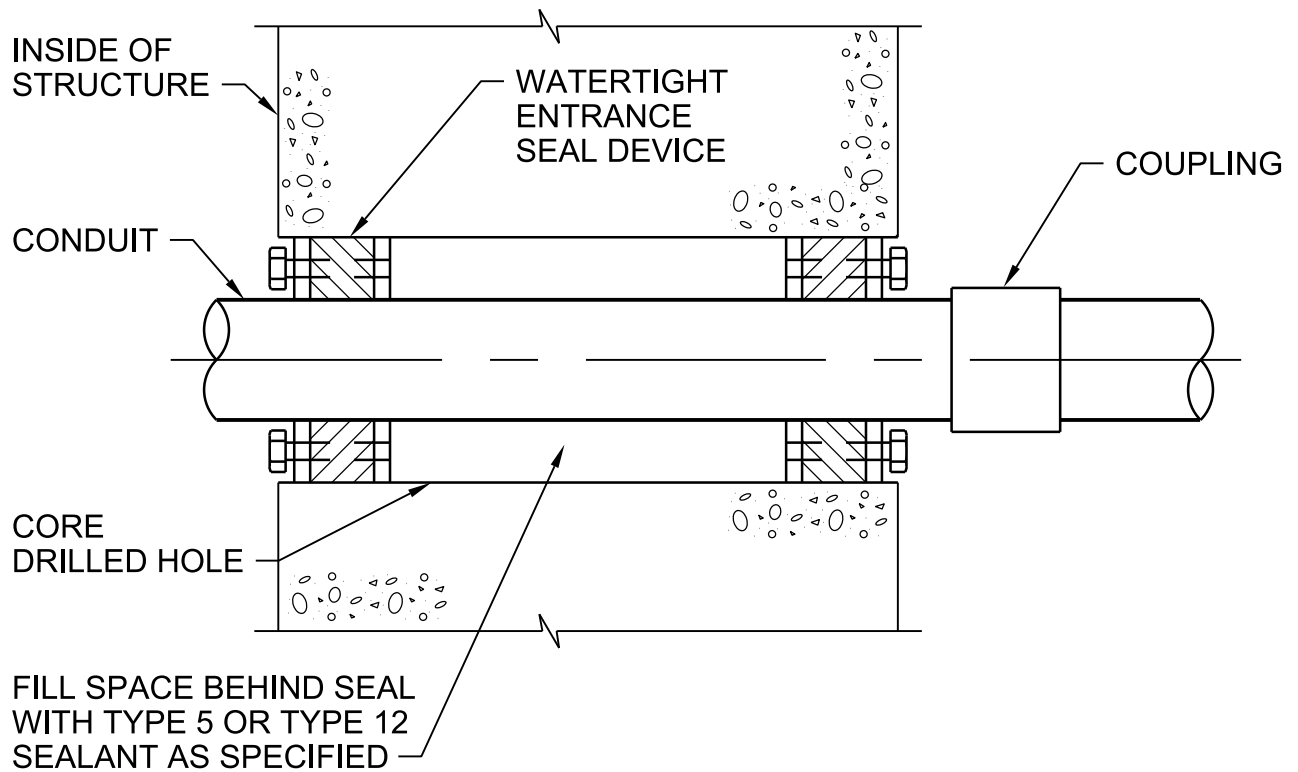
1. LENGTH AS REQUIRED TO LIMIT UNSUPPORTED CONDUIT LENGTH TO MAXIMUM VALUES ALLOWED BY NEC.
2. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
3. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

VERTICAL CONDUIT SUPPORT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-318



NOTES:

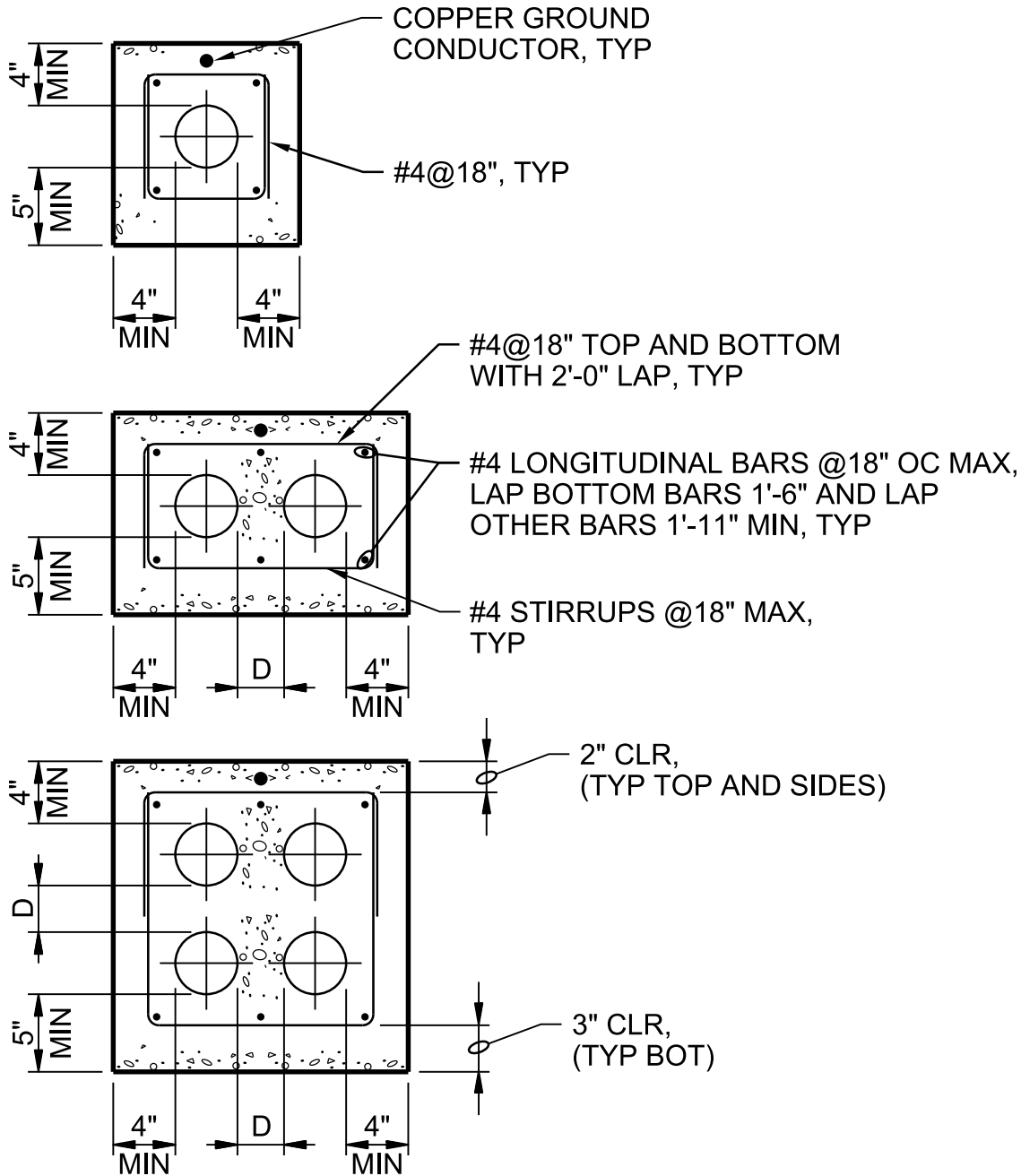
1. USE WATERTIGHT CONDUIT SEAL WHERE CONDUIT PENETRATIONS OF EXISTING BUILDING EXTERIOR WALLS ARE BELOW GRADE.

WATERTIGHT WALL CONDUIT SEAL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-320



D = 3" FOR 2" AND LARGER CONDUITS

D = 2" FOR 1 1/2" AND SMALLER CONDUITS

NOTES:

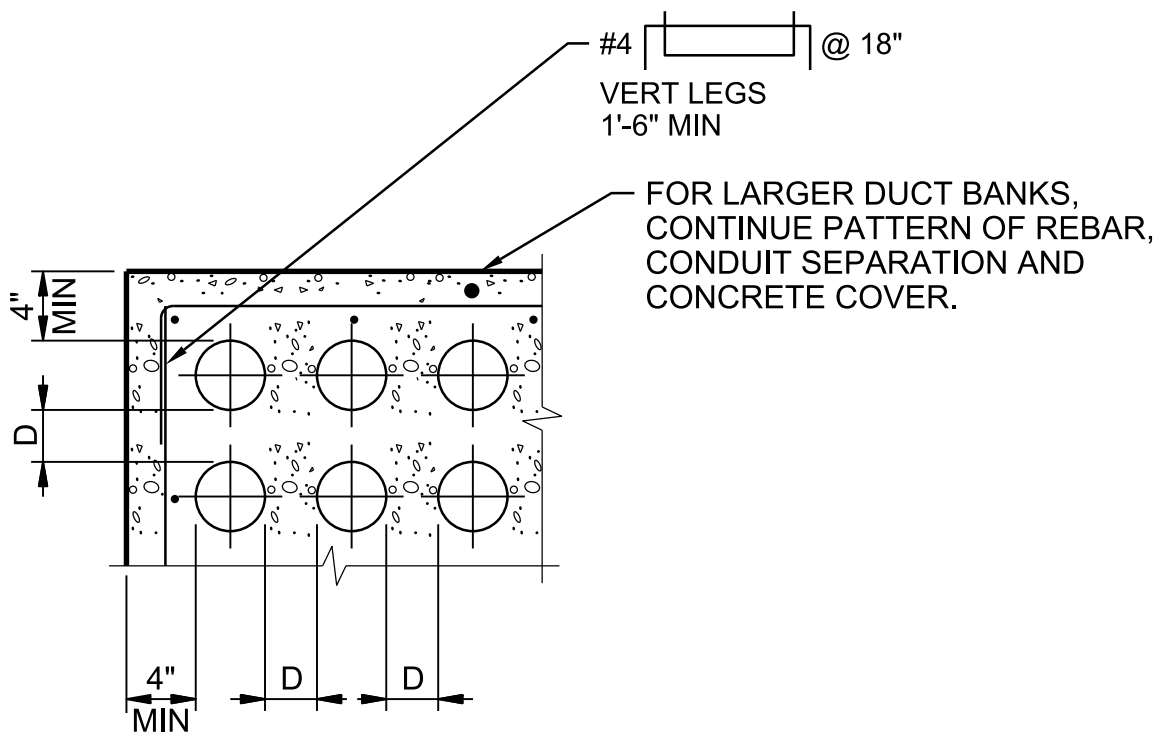
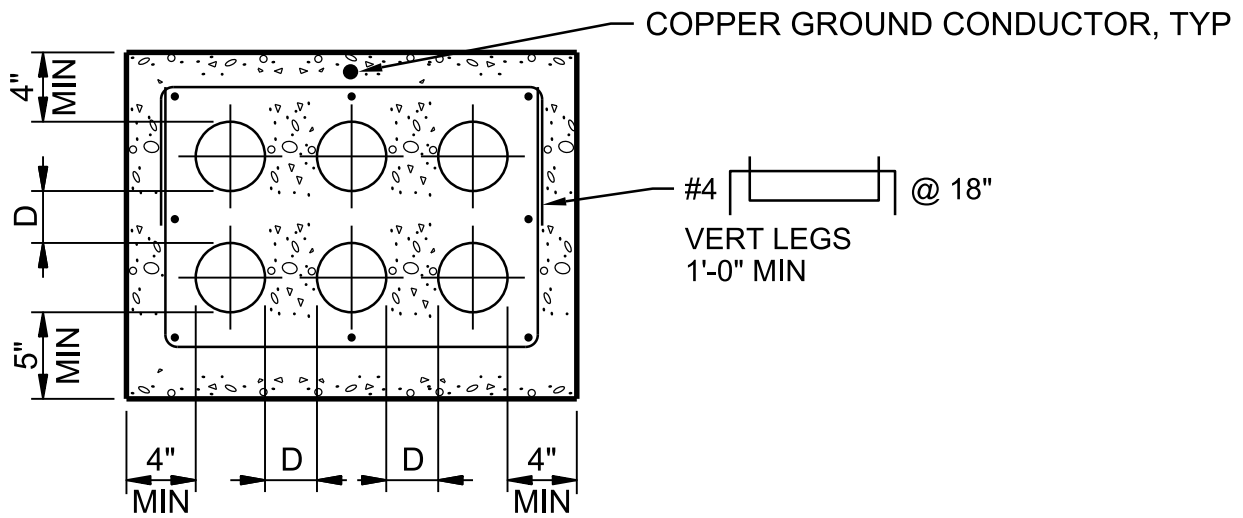
1. PROVIDE 6" MINIMUM COMPACTED GRAVEL, 3/4" MINUS, UNDER ALL CONCRETE ENCASED DUCT RUNS.

DUCT BANK

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-400b



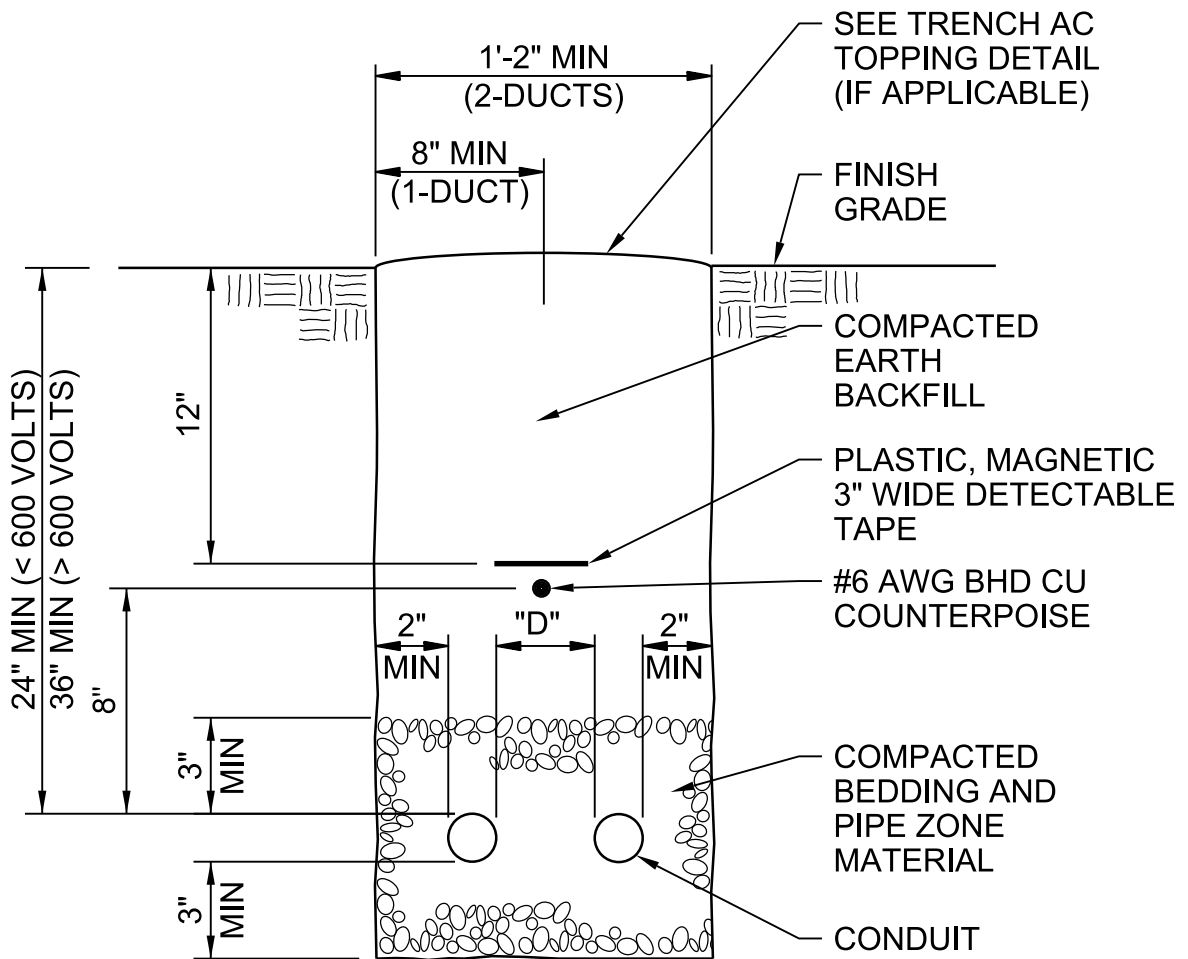
DUCT BANK

NTS

DETAIL 2 OF 2

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-400c



D = 3" MIN FOR 2" AND LARGER CONDUIT

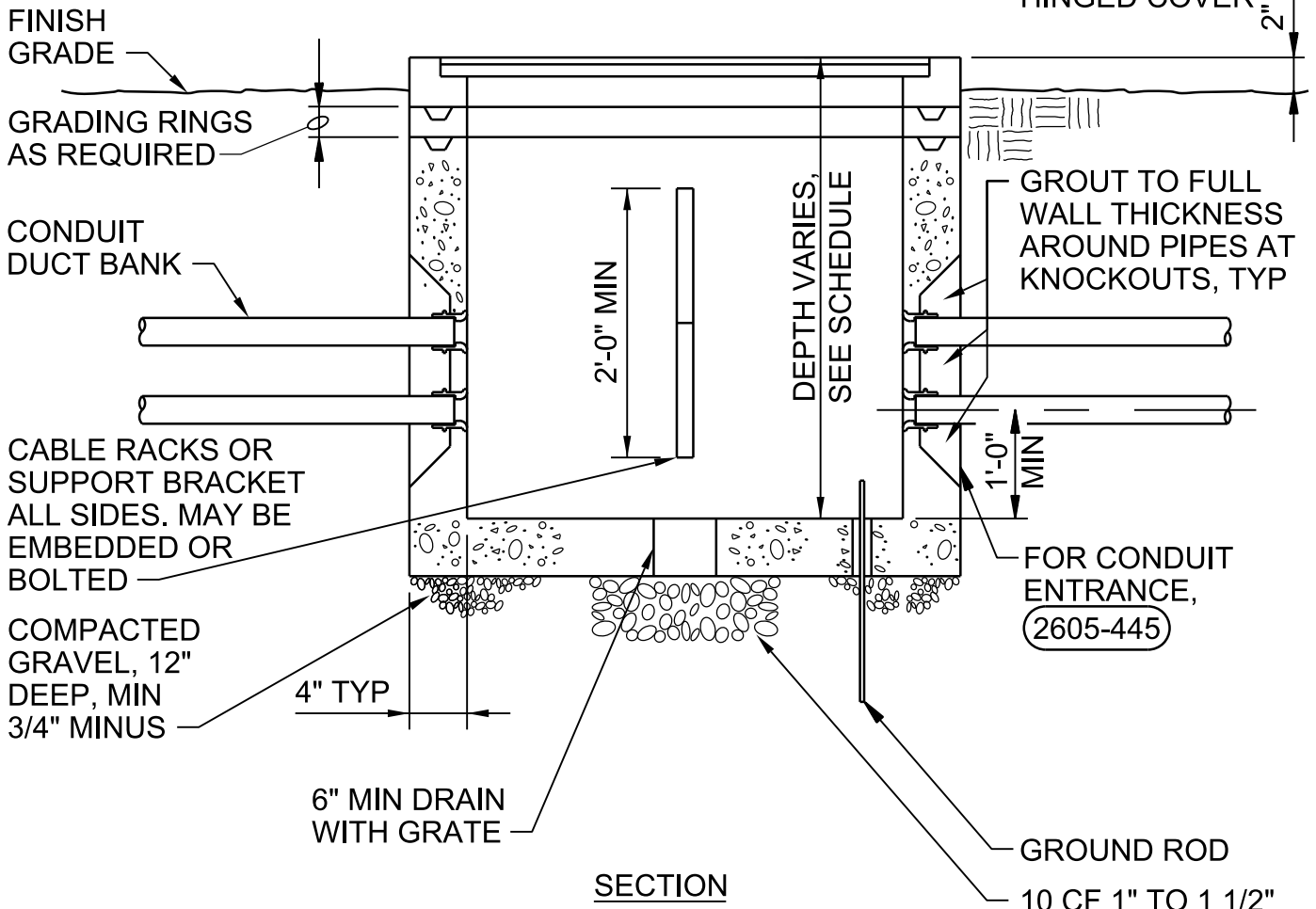
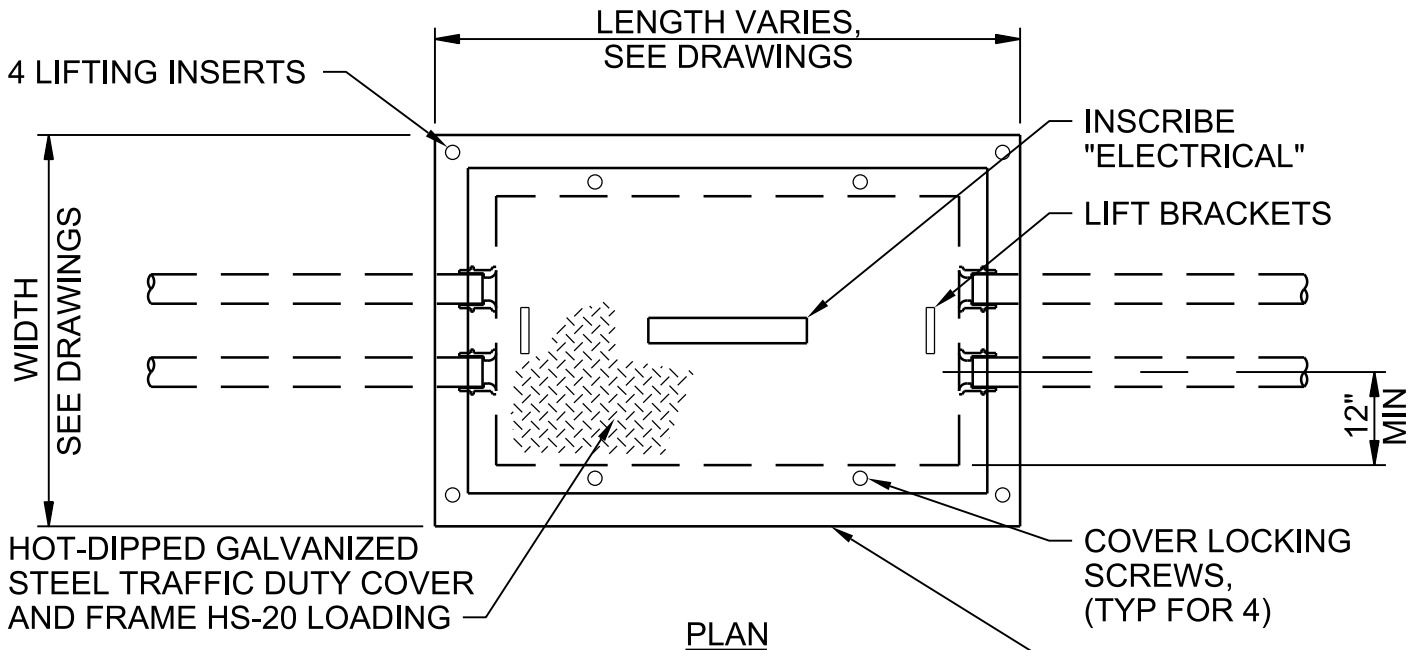
D = 2" MIN FOR 1 1/2" AND SMALLER CONDUIT

TRENCH AND CONDUIT PLACEMENT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-423

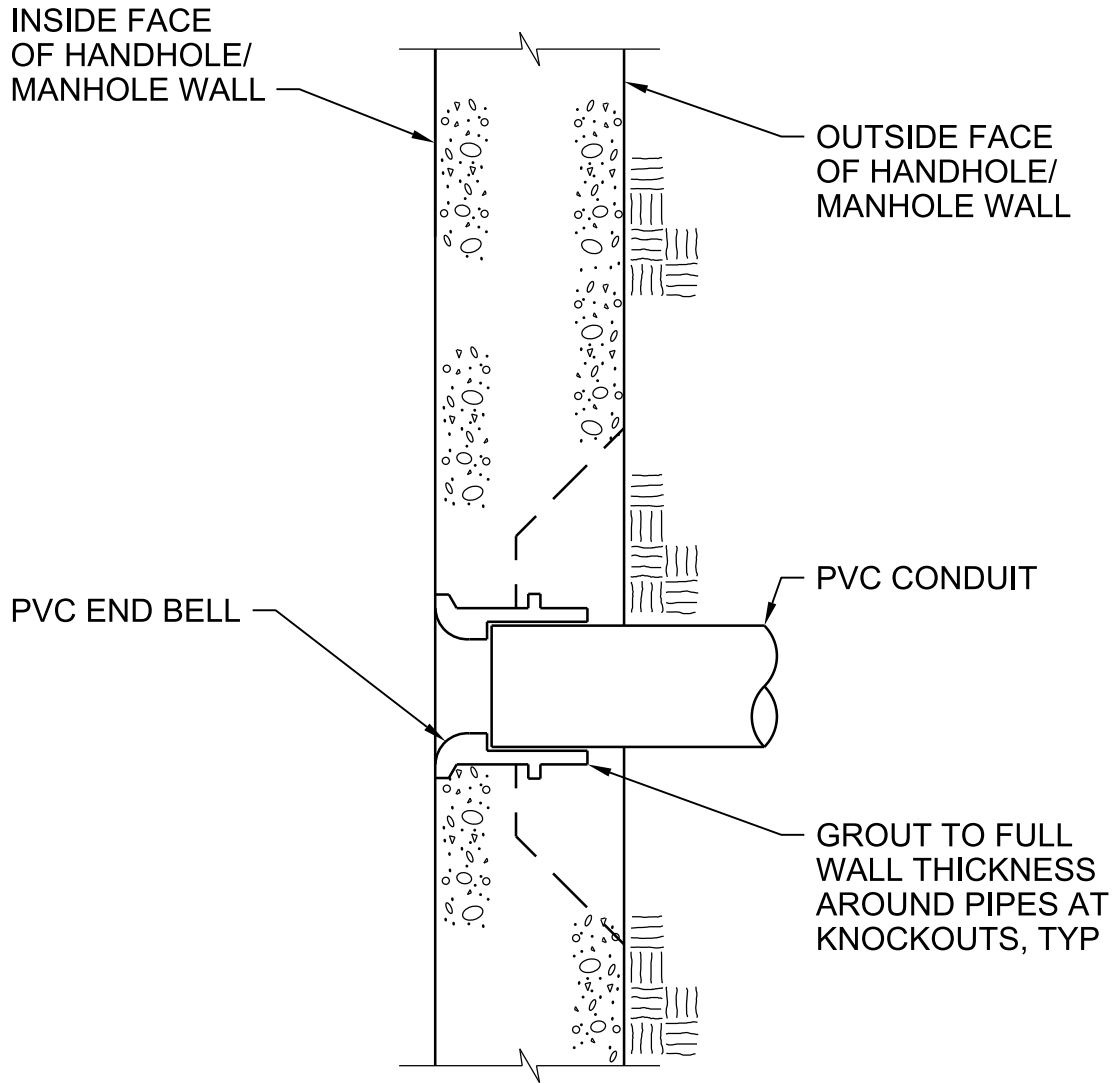


HANDHOLE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2605-444

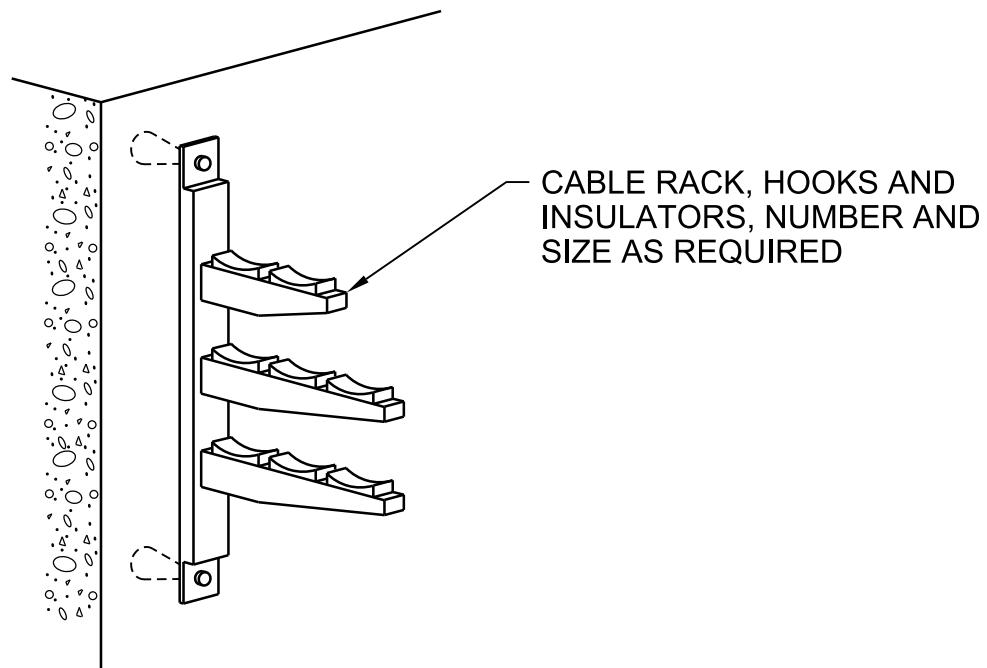


CONDUIT HANDHOLE/MANHOLE ENTRANCE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-445



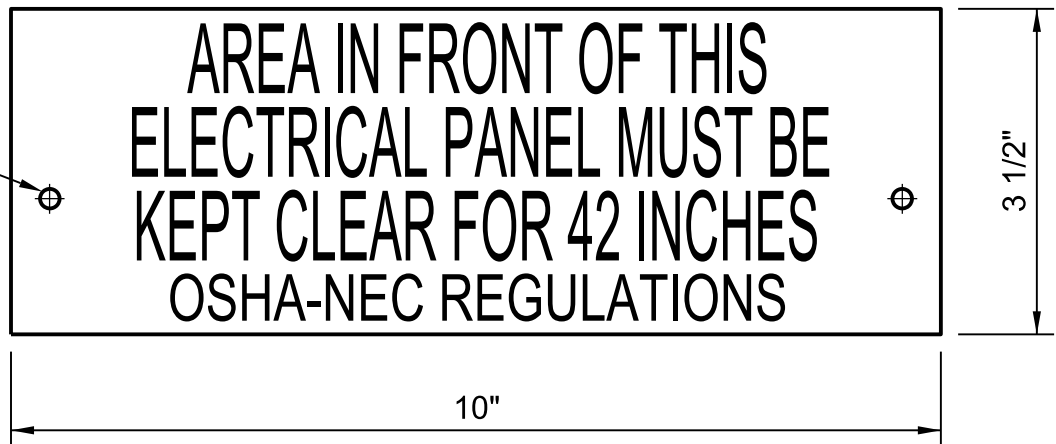
CABLE RACK

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-448

1/8" HOLE FOR
POP RIVET,
(2 PLACES)



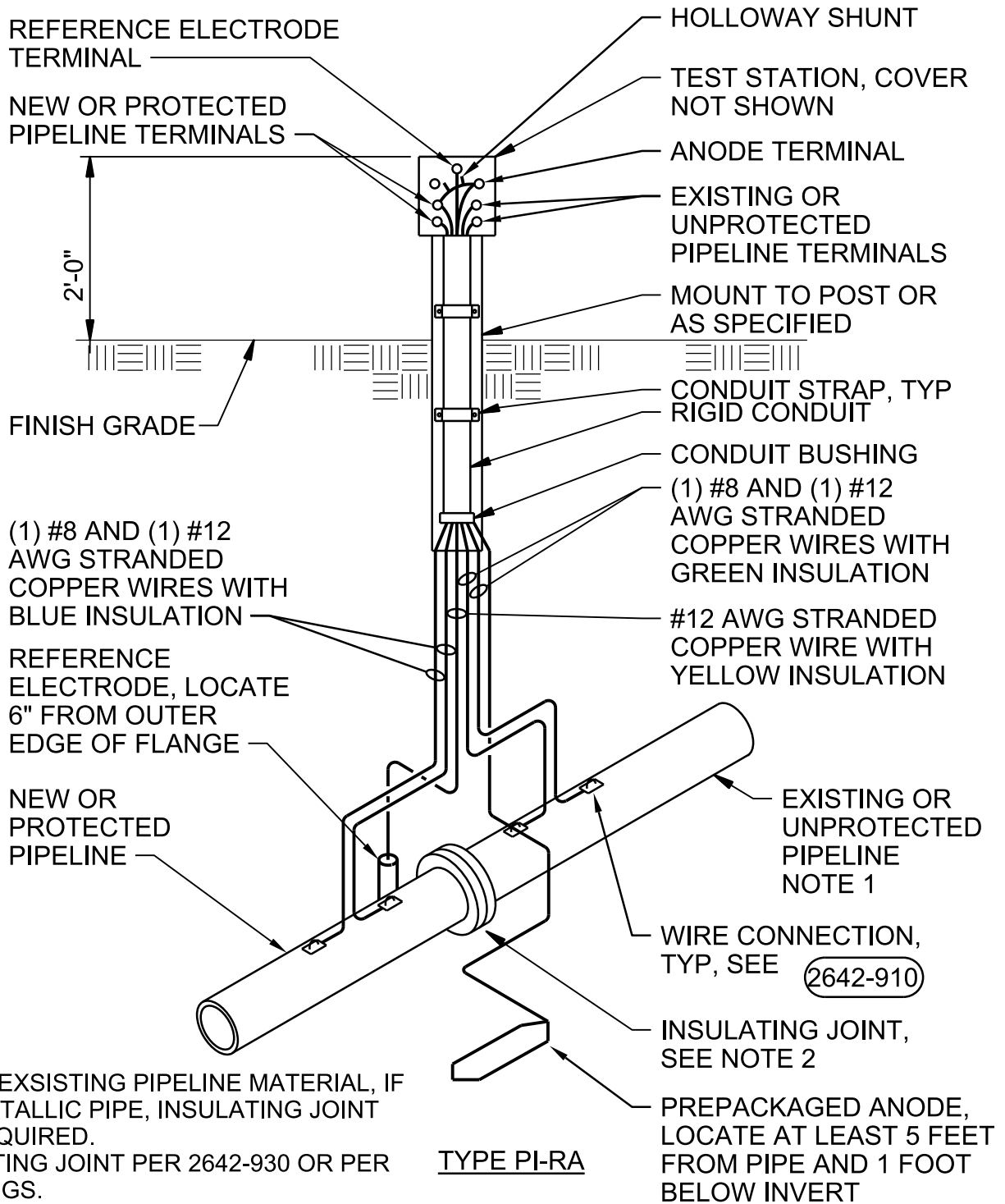
TOP 3 ROWS: 3/4 " LETTERS
BOTTOM ROW: 1/2 " LETTERS
BLACK LETTERING ON WHITE BACKGROUND

OSHA/NEC PLACARD

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2605-501



NOTES:

1. VERIFY EXSISTING PIPELINE MATERIAL, IF NON METALLIC PIPE, INSULATING JOINT NOT REQUIRED.
2. INSULATING JOINT PER 2642-930 OR PER DRAWINGS.
3. LOCATE TEST STATION WITHIN 1 FOOT OF BUILDING, WIRES SHALL BE SUPPLIED WITH ENOUGH LENGTH WITHOUT SPLICES.

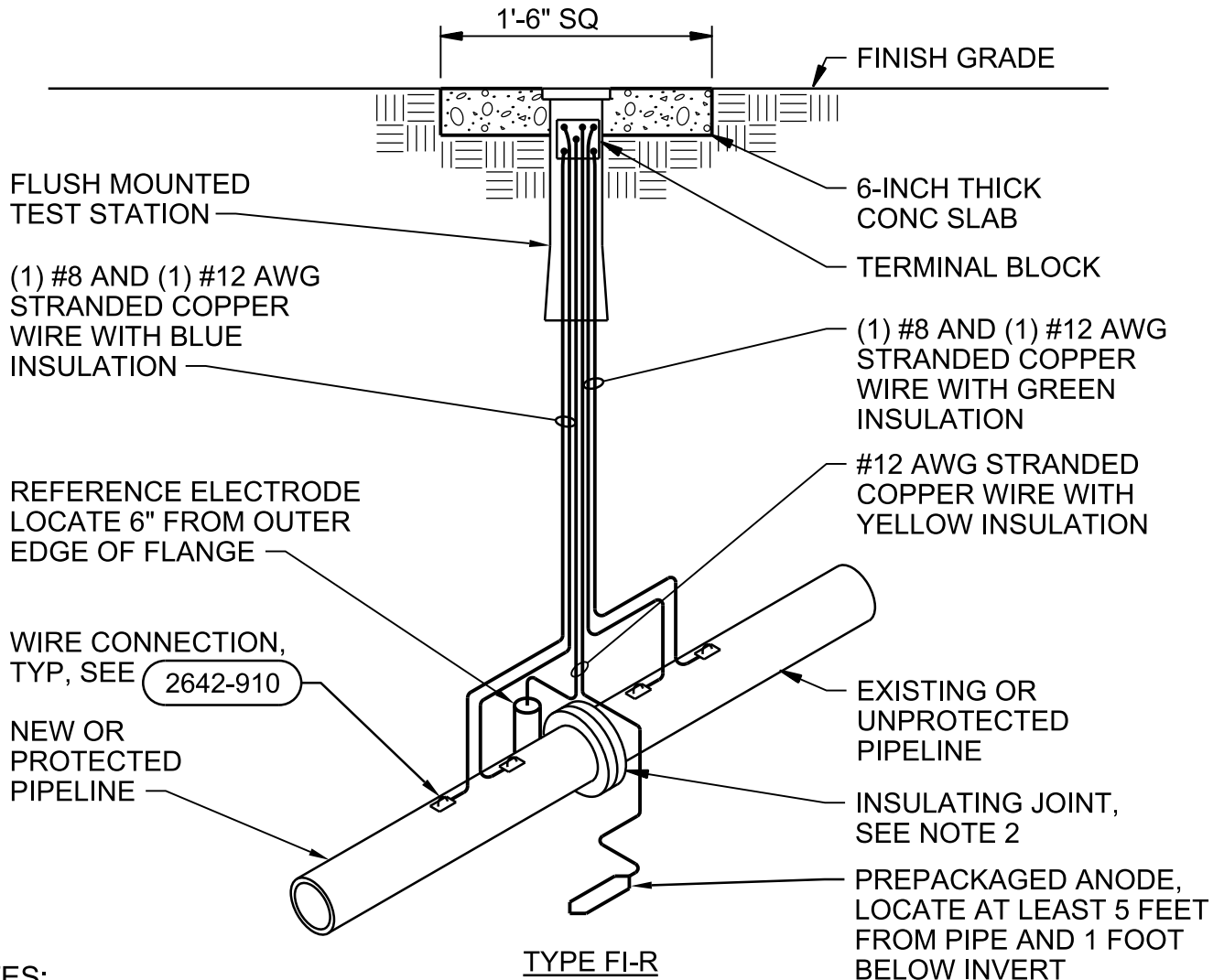
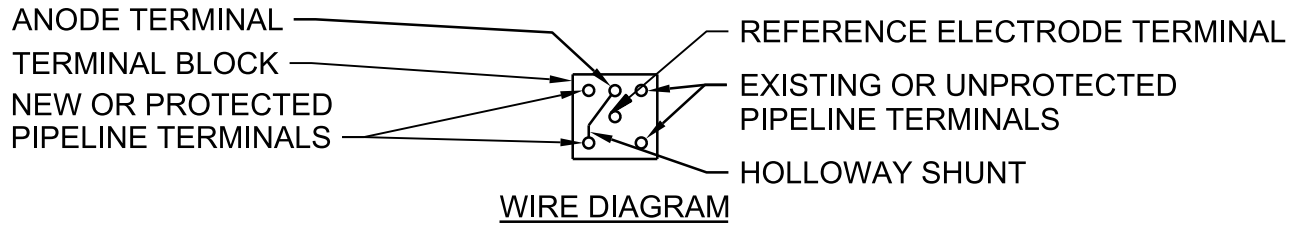
CATHODIC PROTECTION

POST MOUNTED TEST STATION WITH INSULATING JOINT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2642-805



NOTES:

1. PROVIDE SUFFICIENT SLACK IN TEST WIRES TO ALLOW TERMINAL BLOCK TO EXTEND 1'-6" OUT OF TEST STATION. COIL WIRES IN TEST STATION.
2. INSULATING JOINT PER 2642-930 OR PER DRAWINGS. WHERE ELECTRICAL ISOLATION OF GLASS LINED PIPE IS NOT FEASIBLE, INCLUDE TWO ADDITIONAL ANODES ON THE NEW PIPE NEAR THE JOINT LOCATION. ANODES SHALL BE SPACED AT A MINIMUM OF 5 FEET FROM EACH OTHER.

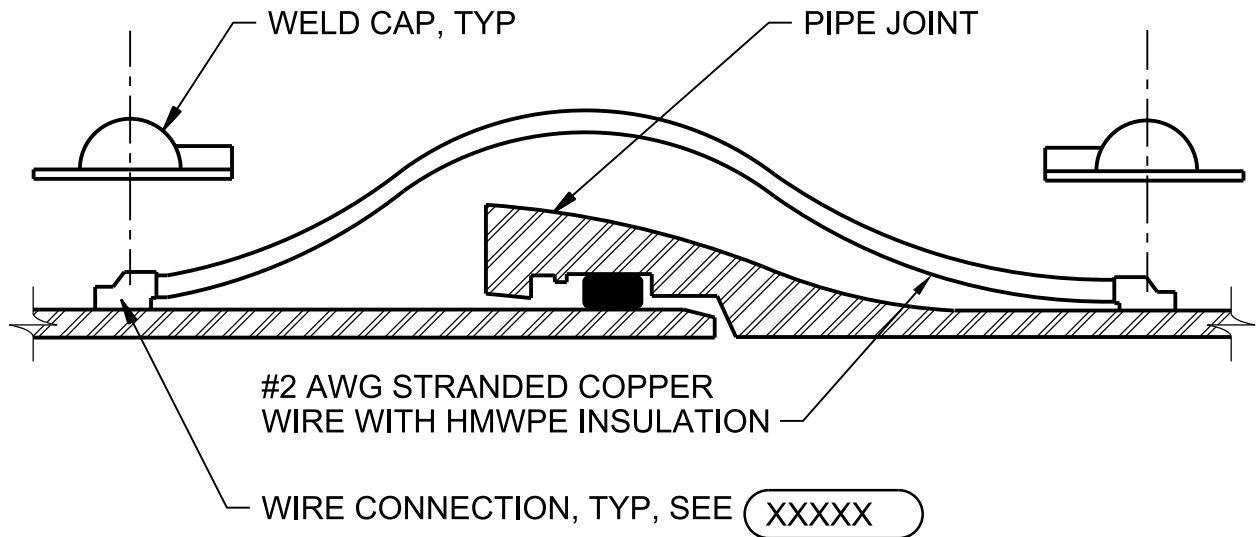
CATHODIC PROTECTION

FLUSH MOUNTED TEST STATION WITH INSULATING JOINT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

2642-825

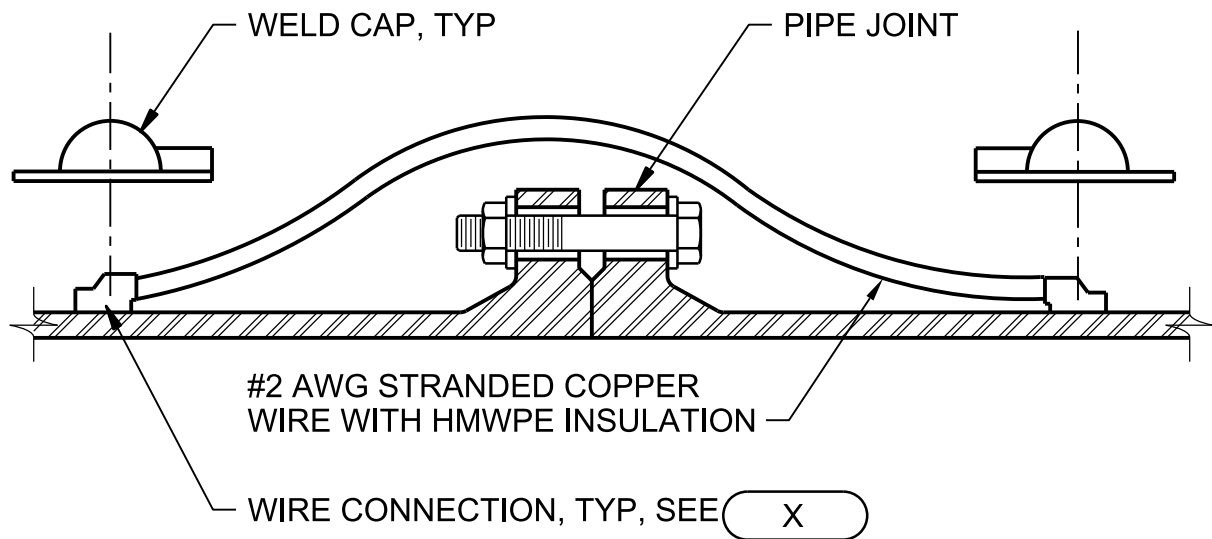


PUSH-ON JOINT BOND

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2642-840

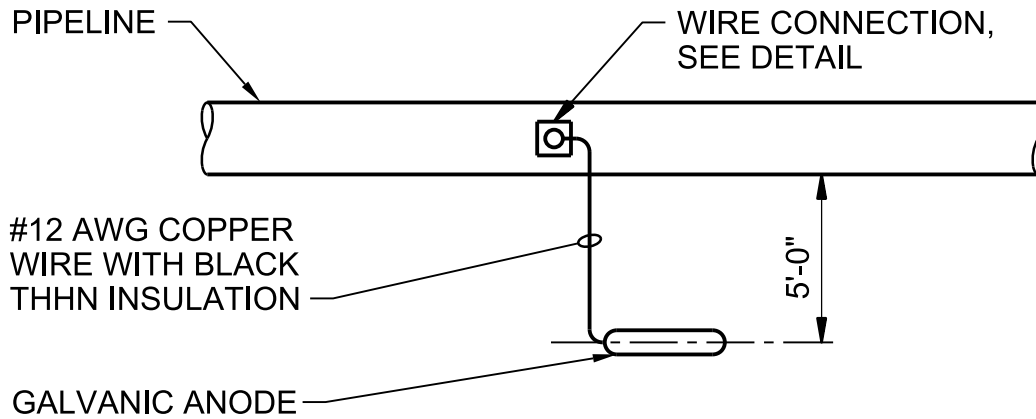


FLANGED JOINT BOND

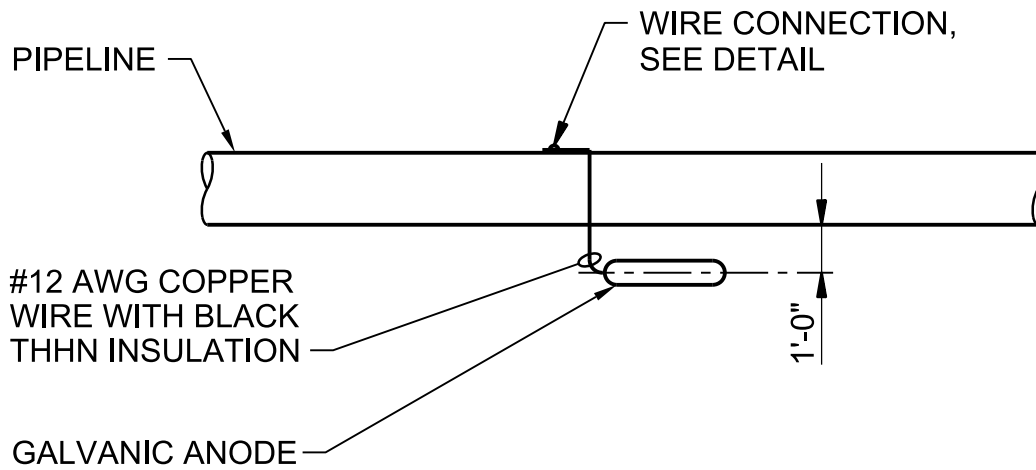
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2642-842



PLAN



ELEVATION

GALVANIC ANODE INSTALLATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2642-869

WIRE SIZE VARIES, TWO
WIRES REQD FOR TEST
STA INSTALLATIONS ONLY

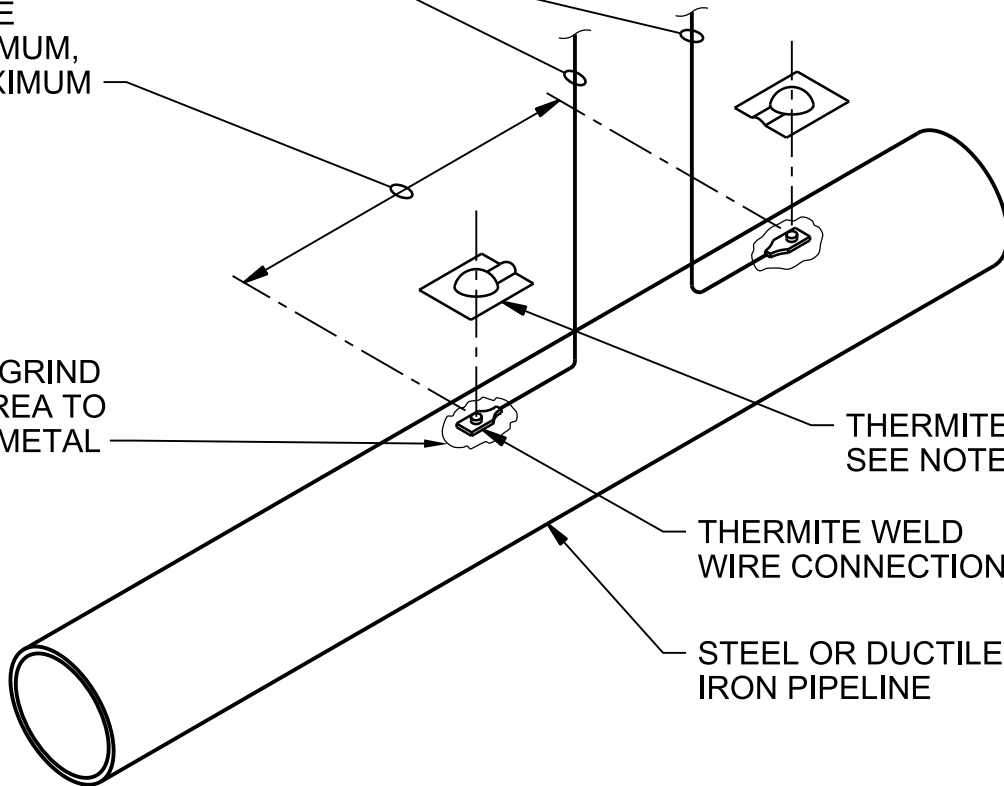
ONE PIPE
DIA MINIMUM,
2'-0" MAXIMUM

FILE OR GRIND
WELD AREA TO
BRIGHT METAL

THERMITE WELD CAP,
SEE NOTE 4, TYP

THERMITE WELD
WIRE CONNECTION

STEEL OR DUCTILE
IRON PIPELINE



NOTES:

1. COPPER SLEEVE REQUIRED FOR THERMITE WELDING OF #10 AWG AND SMALLER WIRE.
2. USE COPPER SLEEVE ON #2 AWG JOINT BONDING WIRES.
3. WELDER AND CARTRIDGE SIZE VARIES ACCORDING TO WIRE SIZE AND PIPE MATERIAL, CONSULT WELDER MANUFACTURER FOR RECOMMENDED WELDER AND CARTRIDGE.
4. COAT WELD AREA AND FILL RECESS ON THERMITE WELD CAP WITH COLD APPLIED COAL TAR MASTIC AND APPLY CAP TO WELD.

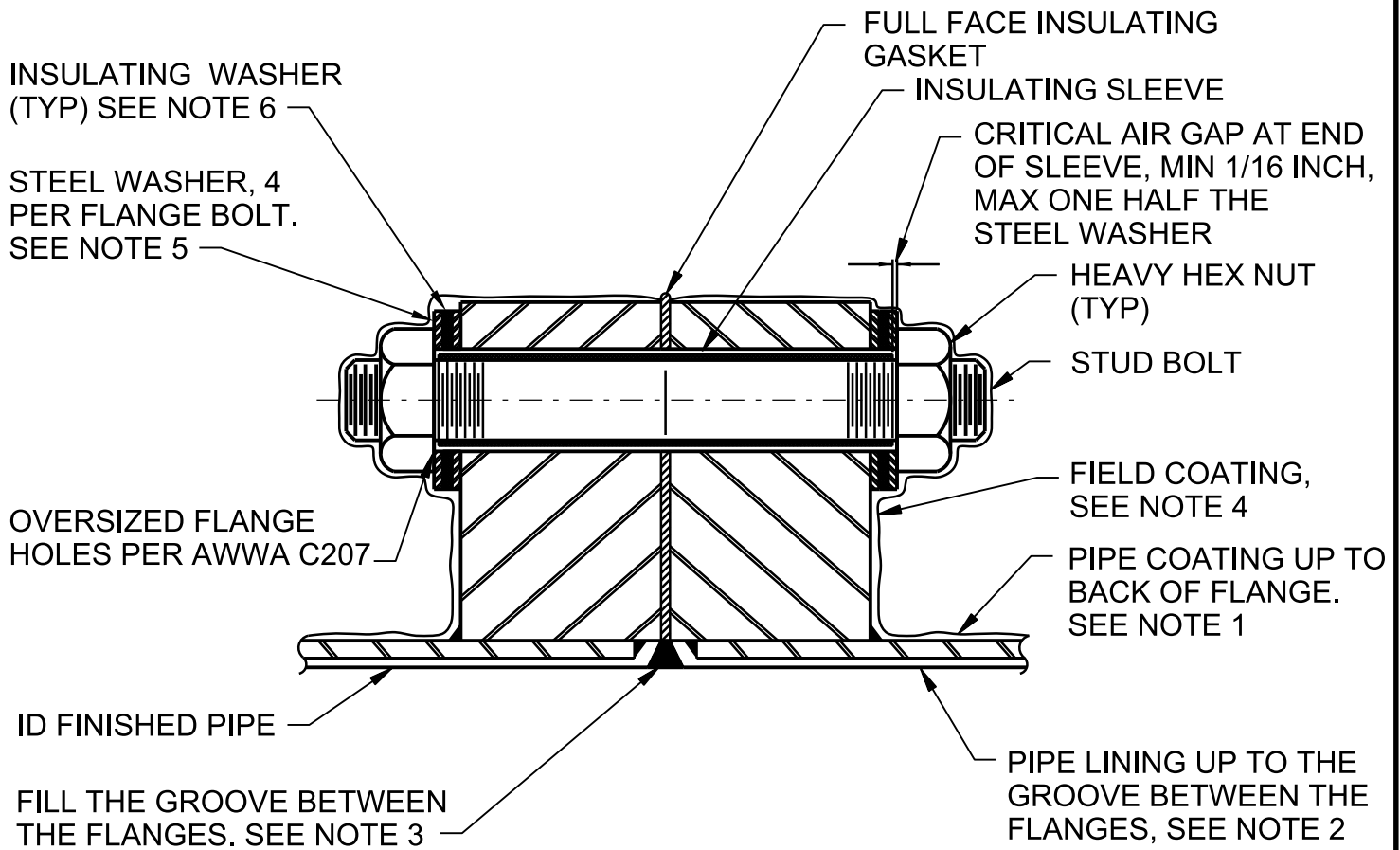
CATHODIC PROTECTION

WIRE CONNECTION FOR STEEL AND DUCTILE IRON PIPE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2642-910



NOTES:

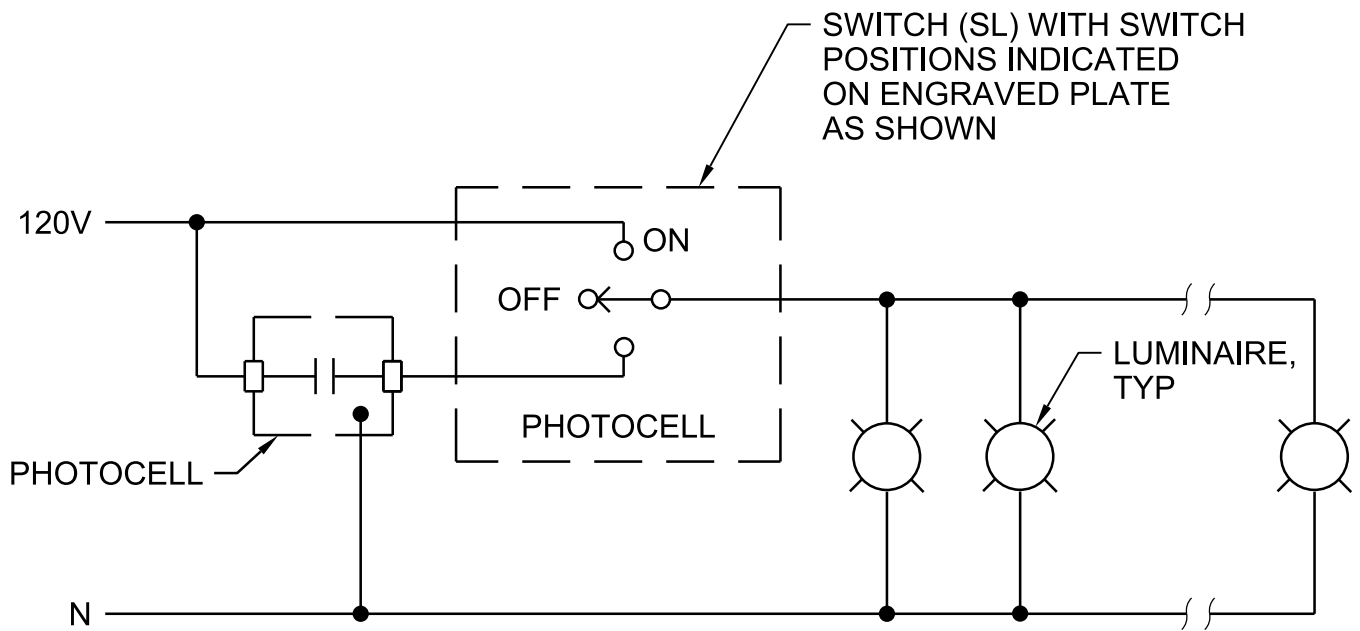
1. THE PIPE COATING ON EACH SIDE OF THE INSULATED FLANGE SHALL BE THE SAME IN TYPE, THICKNESS, AND QUALITY UP TO THE BACK SIDE OF THE RESPECTIVE FLANGE.
2. THE LINING ON THE PIPE SHALL BE THE SAME IN TYPE, THICKNESS, AND QUALITY UP TO THE INSULATED FLANGE JOINT.
3. FOR PIPE LARGER THAN 24 INCH DIAMETER , FILL THE INSULATED FLANGE'S INTERNAL GAP WITH A MATERIAL COMPATIBLE WITH THE PIPE LINING.
4. COAT JOINTS AS SPECIFIED AFTER INSTALLATION.
5. FOR PIPE SMALLER THAN 36 INCH DIAMETER DELETE INNER STEEL WASHERS.
6. FOR BURIED OR SUBMERGED INSULATING FLANGE, DO NOT INSTALL INSULATING WASHER ON PROTECTED SIDE OF FLANGE.

INSULATED FLANGES

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2642-930

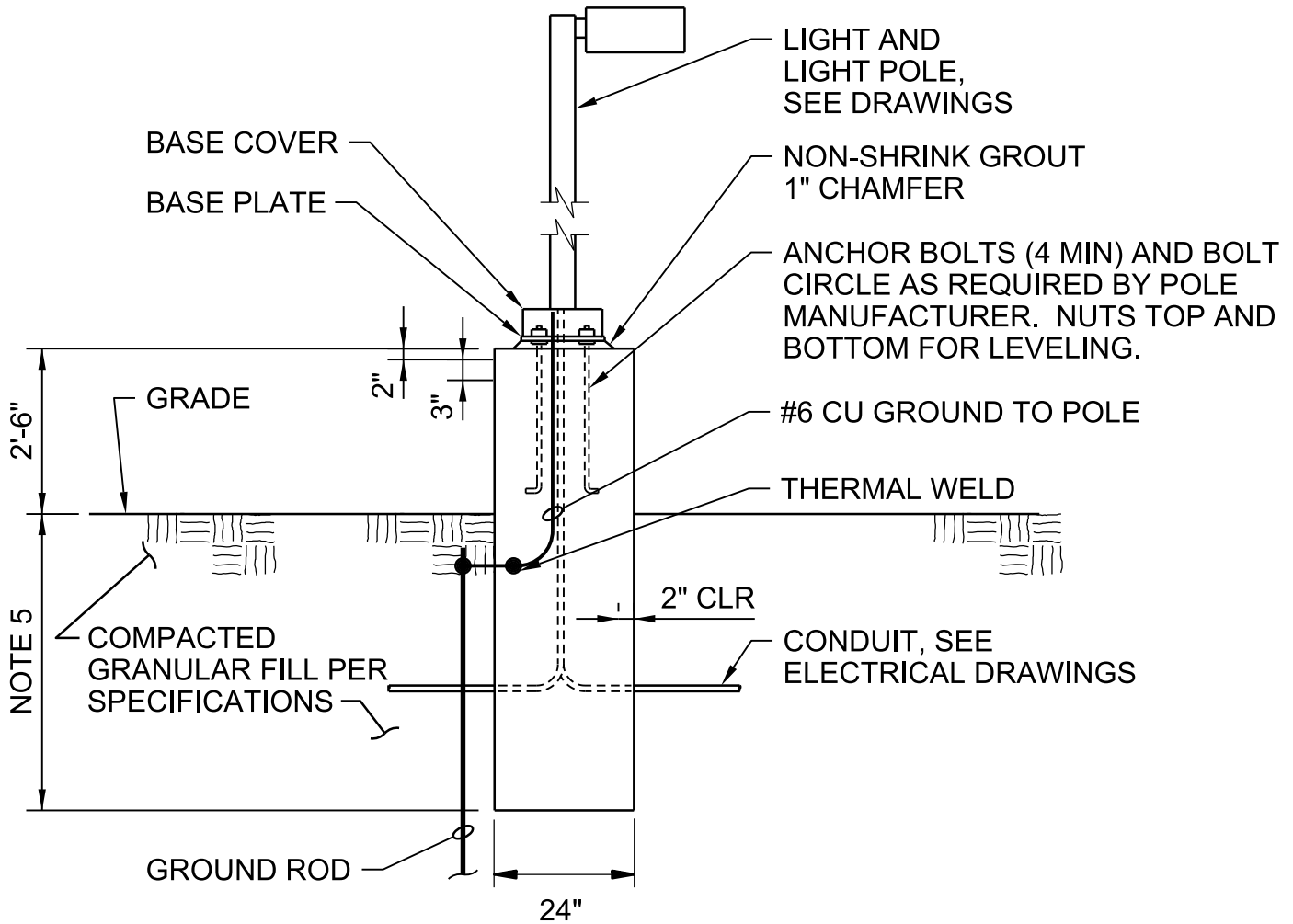


EXTERIOR BUILDING LIGHT CONTROL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2650-102



NOTES:

1. ALL REBAR DESIGNED AND PROVIDED BY FOOTING MANUFACTURER (NOT SHOWN). REFER TO STRUCTURAL DESIGN CRITERIA IN THE GENERAL SECTION OF DRAWINGS.
2. INSTALL 2 CONDUITS (MINIMUM) PER POLE.
3. CONDUITS SHALL BE STUBBED UP TO WITHIN 6 INCHES OF THE POLE HANDHOLE.
4. FOR PROPER ORIENTATION OF POLE, COORDINATE WITH SITE PLANS.
5. TO BE DETERMINED BY FOOTING DESIGNER, 2'-6" MINIMUM.

PRECAST SITE LIGHT POLE FOOTING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

2656-216

NEW SURFACING,
OR SURFACE
RESTORATION,
SEE PLANS

TRENCH
BACKFILL
ABOVE
PIPE ZONE

12" MIN

PIPE OUTSIDE
DIAMETER

PIPE BEDDING
MATERIAL

TRENCH
STABILIZATION
WHERE REQD

DEPTH OF
COVER

MARKING
TAPE AS
SPECIFIED

PIPE ZONE

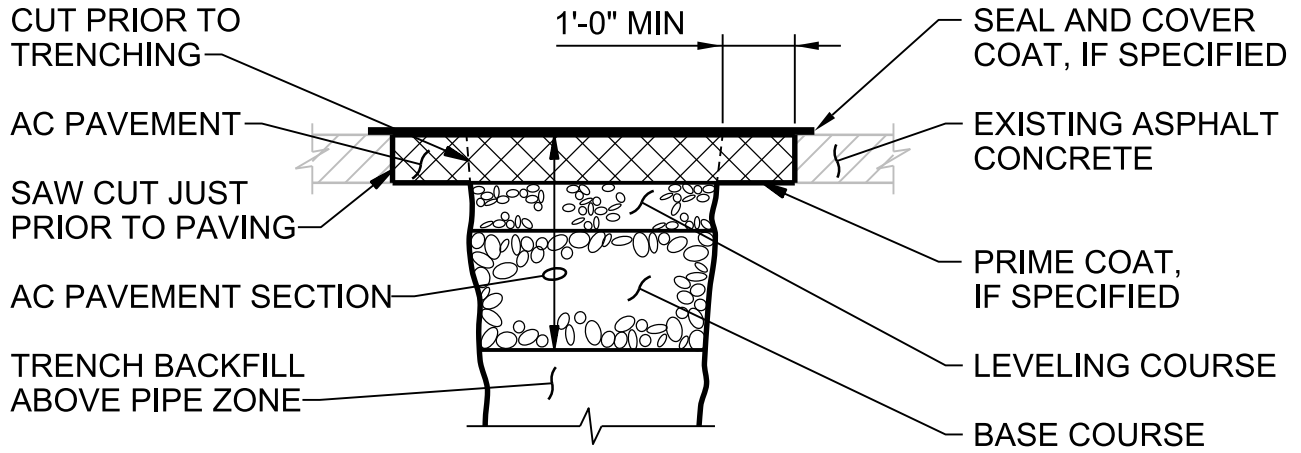
MIN WIDTH
PIPE OD+1'-6"

TYPICAL TRENCH

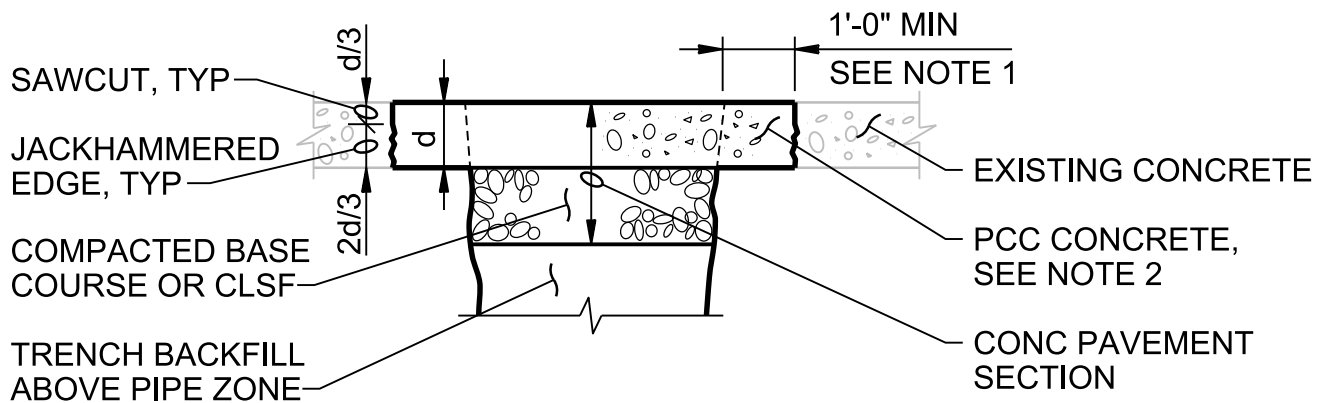
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

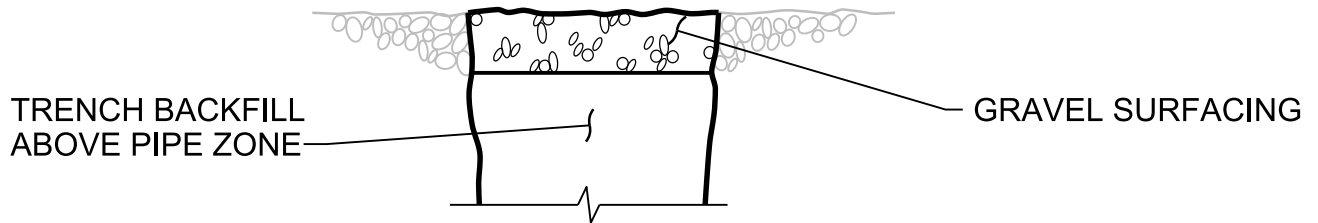
3123-110



ASPHALT SURFACING



PCC CONCRETE SURFACING



GRAVEL SURFACING

NOTES:

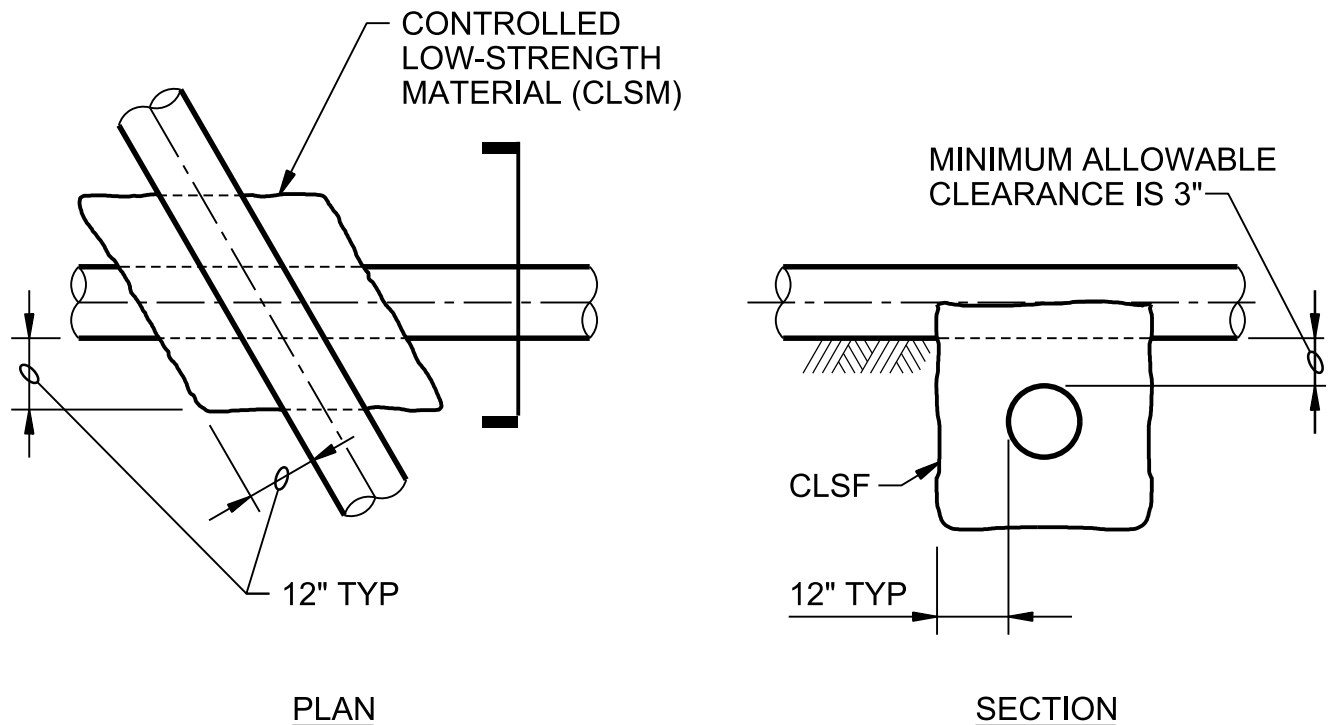
1. IF LOCATION OF TRENCH SAW CUT IS WITHIN 2 FEET OF AN EXISTING JOINT OR EDGE OF CONCRETE, REPLACE ENTIRE CONCRETE TO THE JOINT OR EDGE.
2. CONSTRUCT JOINTS ACROSS NEW CONCRETE TO MATCH EXISTING JOINT TYPES AND LOCATIONS.

SURFACE RESTORATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

3123-115

**NOTES:****CLSM SUPPORT IS REQUIRED:**

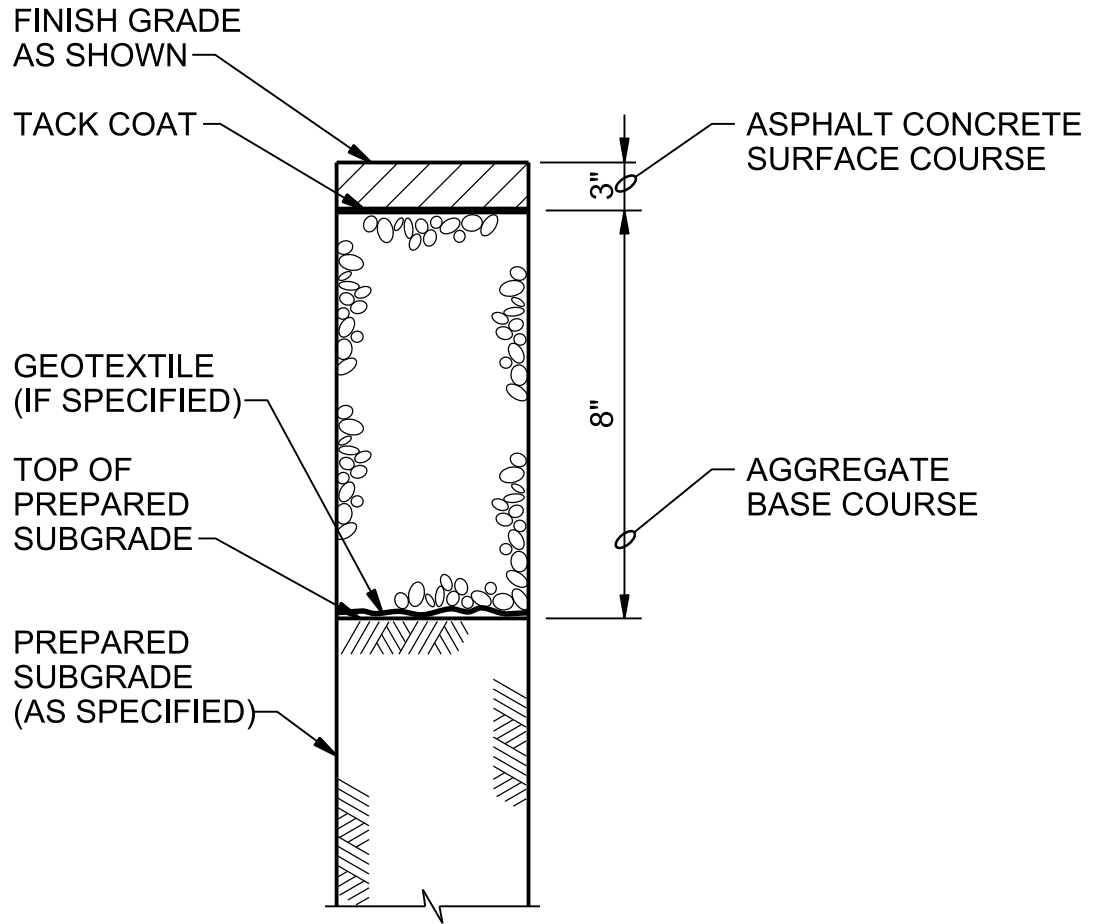
1. WHEN BOTH PIPELINES ARE NEW AND CLEARANCE BETWEEN THEM IS LESS THAN 12".
2. WHEN A NEW PIPELINE IS CROSSING OVER AN EXISTING PIPELINE AND THE CLEARANCE BETWEEN THEM IS LESS THAN 12".
3. AT ALL PIPE CROSSINGS WHERE A NEW PIPELINE IS CROSSING UNDER AN EXISTING PIPELINE.
4. REFER TO SPECIFICATION SECTION 31 23 23.15 FOR CLSM REQUIREMENTS.

TRENCH PIPE CROSSING

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

3123-120

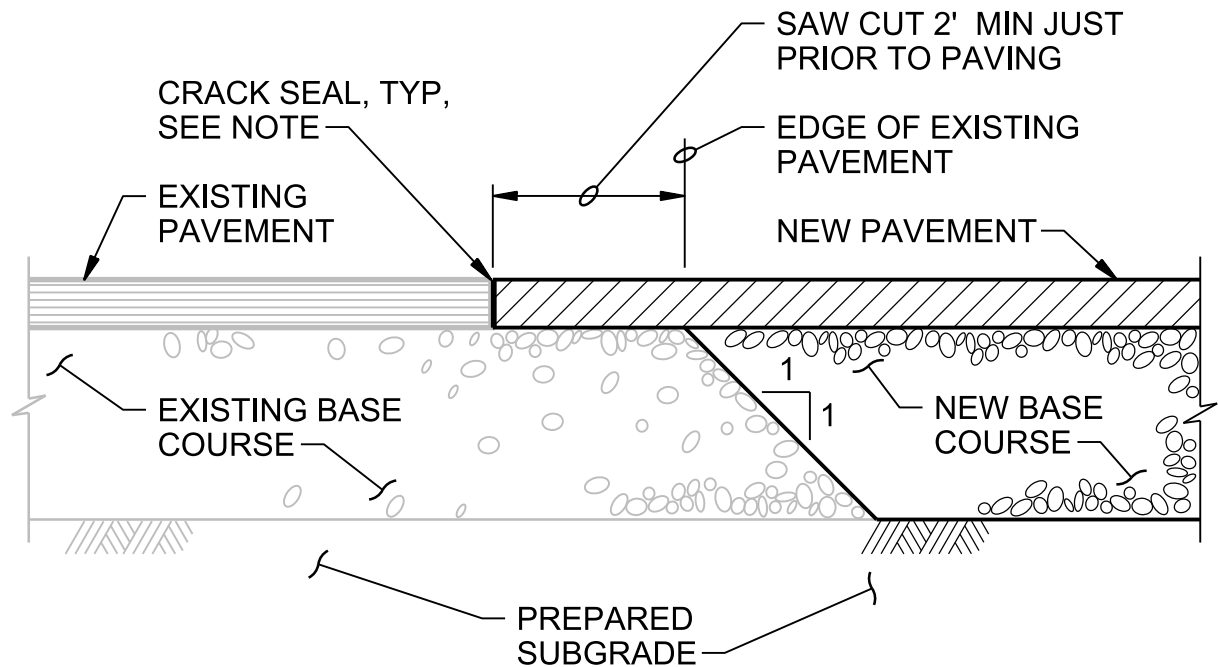


ASPHALT CONCRETE PAVEMENT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

3212-210

**NOTE:**

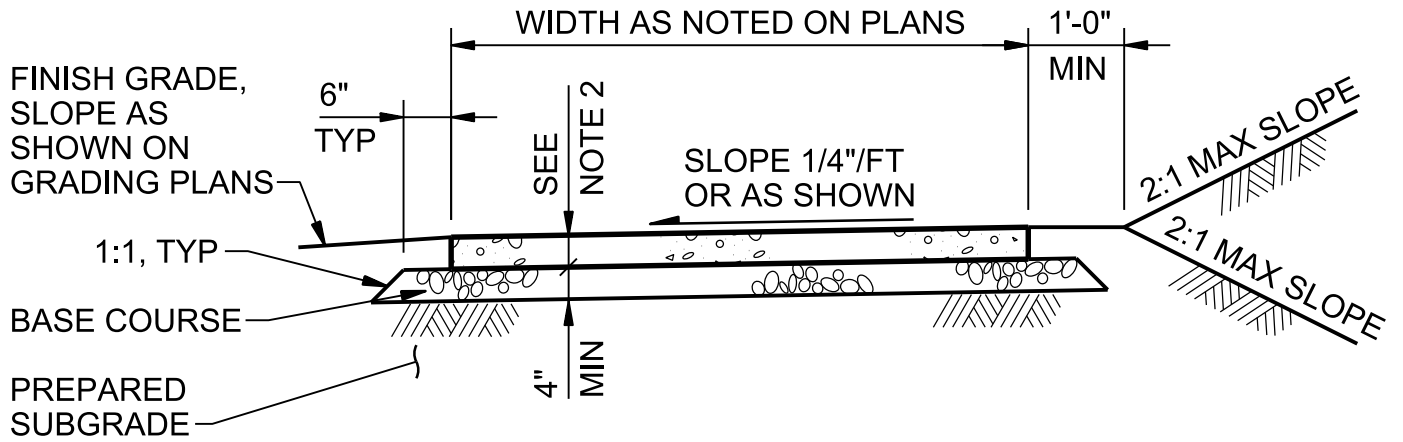
PAINT EDGE OF EXISTING ASPHALT WITH TACK COAT PRIOR TO PAVING.
 CRACK SEAL JOINT AFTER PAVING OPERATION HAS BEEN COMPLETED.

PAVEMENT CONNECTION

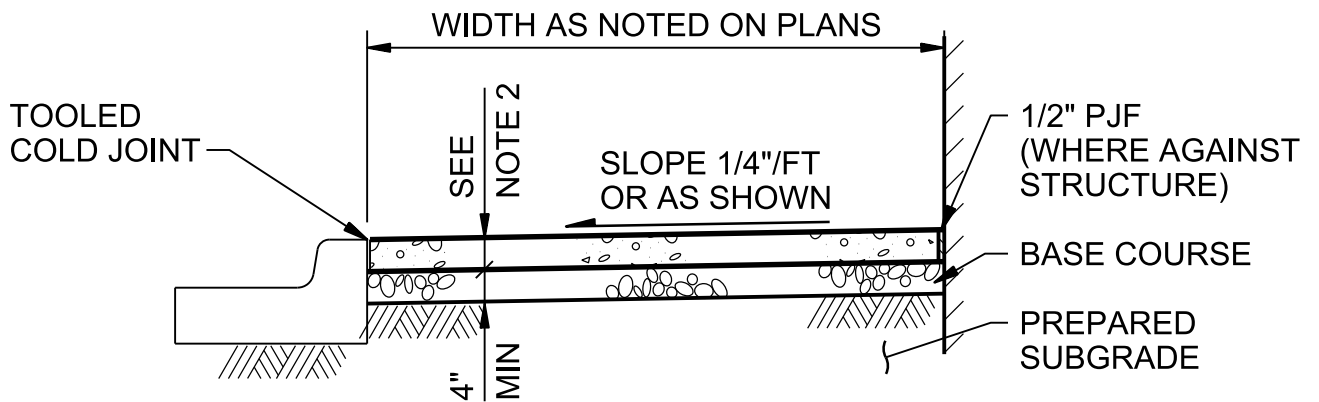
NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

3212-215



TYPICAL SECTION



TYPICAL CURB SECTION

NOTES:

1. SIDEWALKS 8 FEET AND WIDER SHALL HAVE A LONGITUDINAL CONTRACTION JOINT AT THE MIDPOINT.
2. CONCRETE DEPTH FOR STANDARD SIDEWALKS SHALL BE NOMINAL 4" MINIMUM, THICKNESS IN DRIVEWAY SHALL BE 6" MINIMUM.

TYPICAL CONCRETE SIDEWALK

NTS

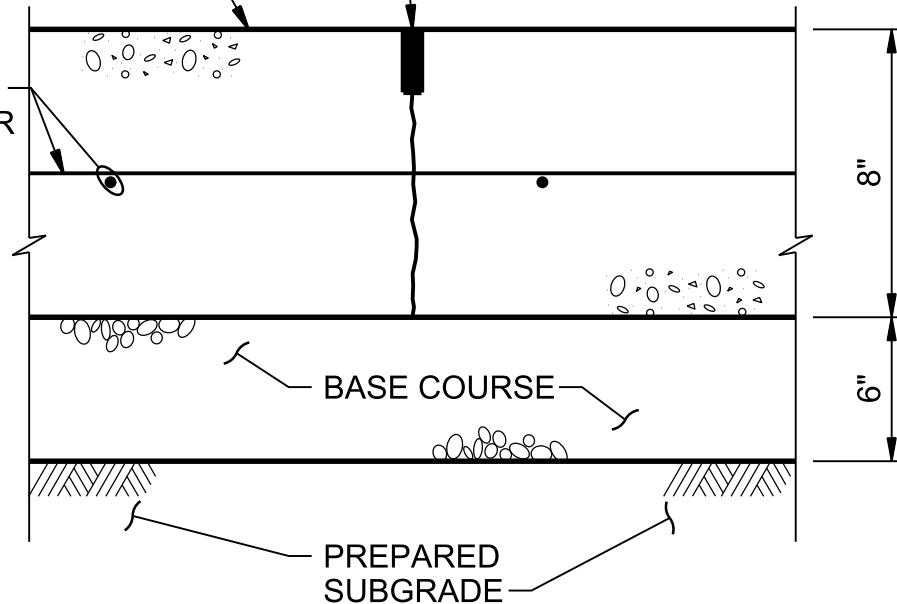
PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

3213-220

CONTRACTION JOINT, SEE NOTE 1 AND 2

CONCRETE SLAB ON GRADE

#5@12" CTD
2-1/2" COVER



NOTES:

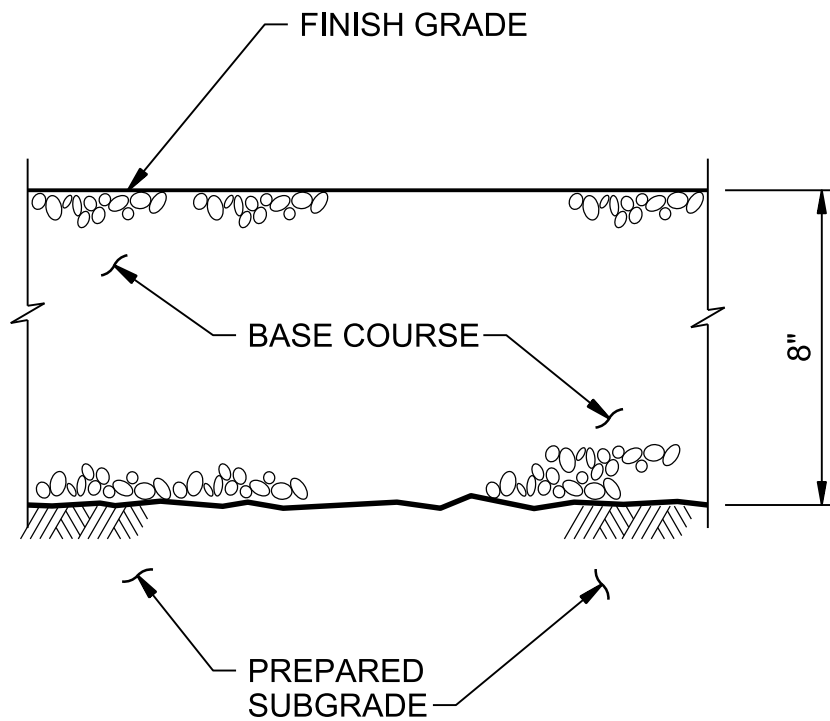
1. CONTRACTION JOINT SHALL BE MADE, CLEANED WITH COMPRESSED AIR, AND FILLED WITH SEALANT AS SPECIFIED.
2. CONCRETE JOINT SPACING: 10' MIN, 15' MAX.
3. INSTALL 1/2" PREMOLDED JOINT FILLER FULL DEPTH WHERE CONCRETE PAVEMENT ABUTS CONCRETE CURB, BUILDING OR ANY RIGID STRUCTURE.
4. PROVIDE A 12" THICK BY 18" WIDE THICKENED EDGE AROUND PERIMETER OF SLAB. TRANSITION THICKENED EDGE TO NORMAL 8" THICKNESS IN 18".

CONCRETE PAVEMENT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

3213-240

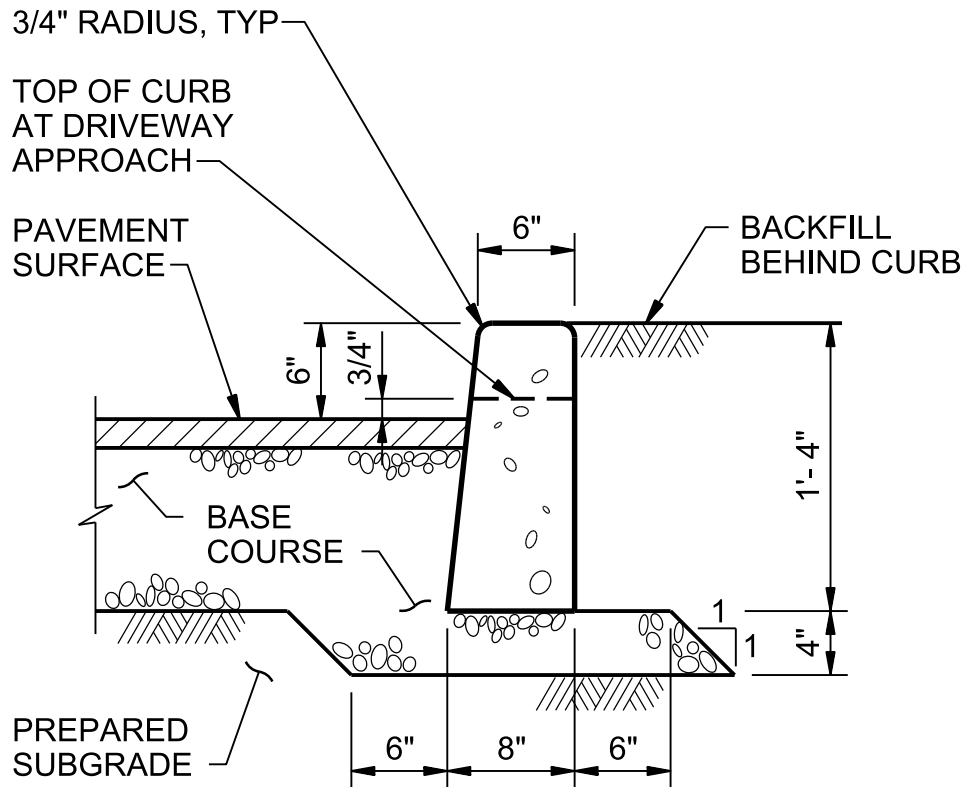


GRAVEL SURFACING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

3215-260

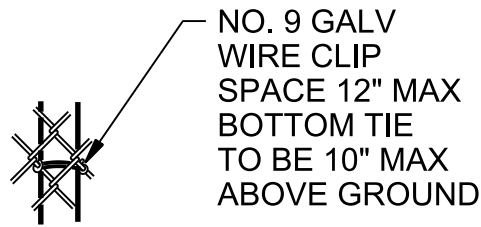


CONCRETE CURB

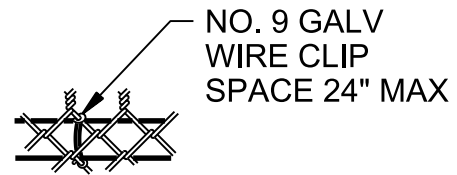
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

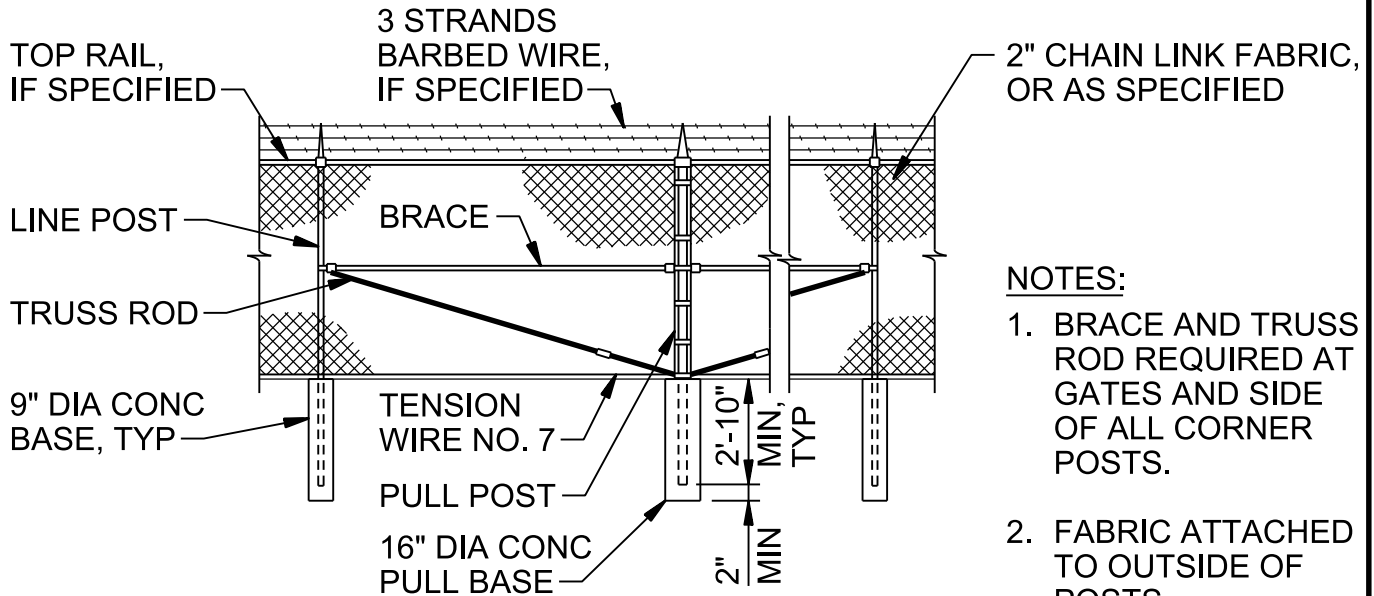
3216-315



LINE POST CONNECTION



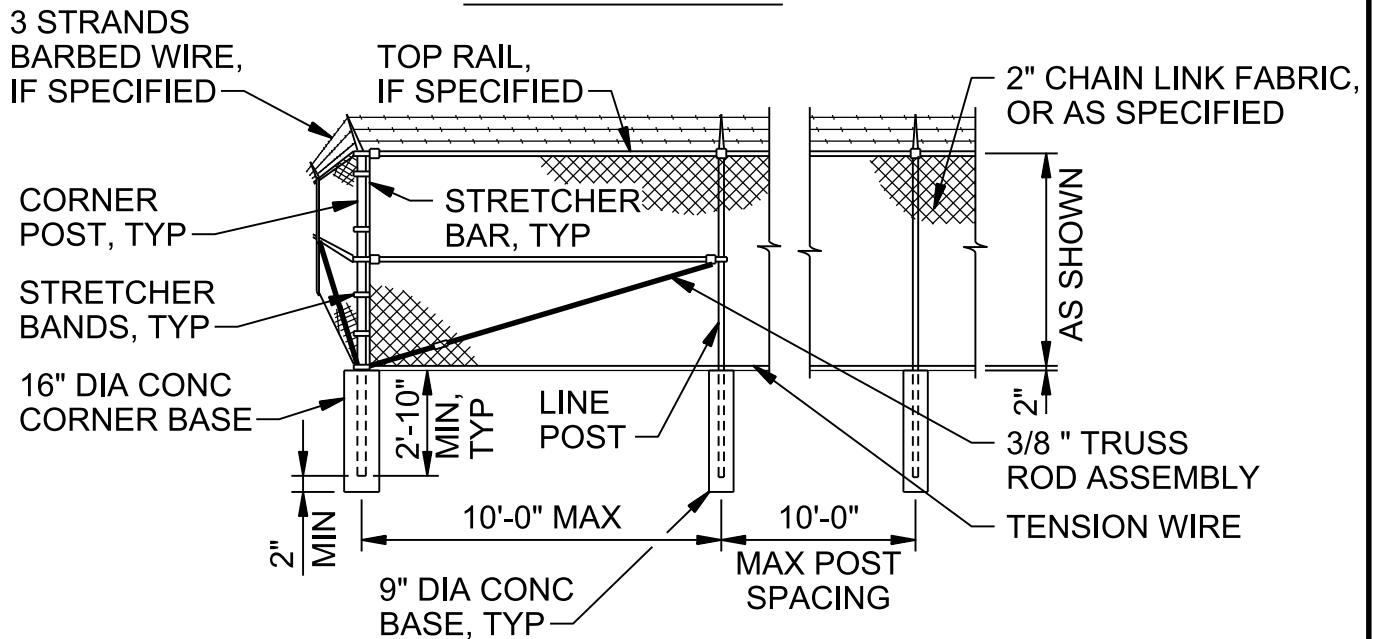
TOP RAIL CONNECTION



TYPICAL PULL POST

NOTES:

1. BRACE AND TRUSS ROD REQUIRED AT GATES AND SIDE OF ALL CORNER POSTS.
2. FABRIC ATTACHED TO OUTSIDE OF POSTS.



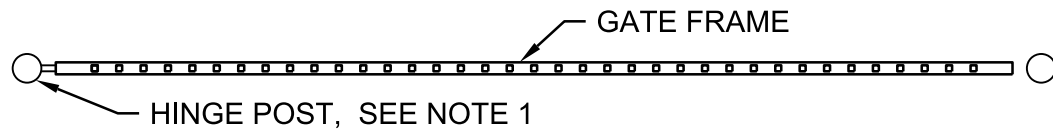
TYPICAL CORNER POST

CHAIN LINK FENCE

NTS

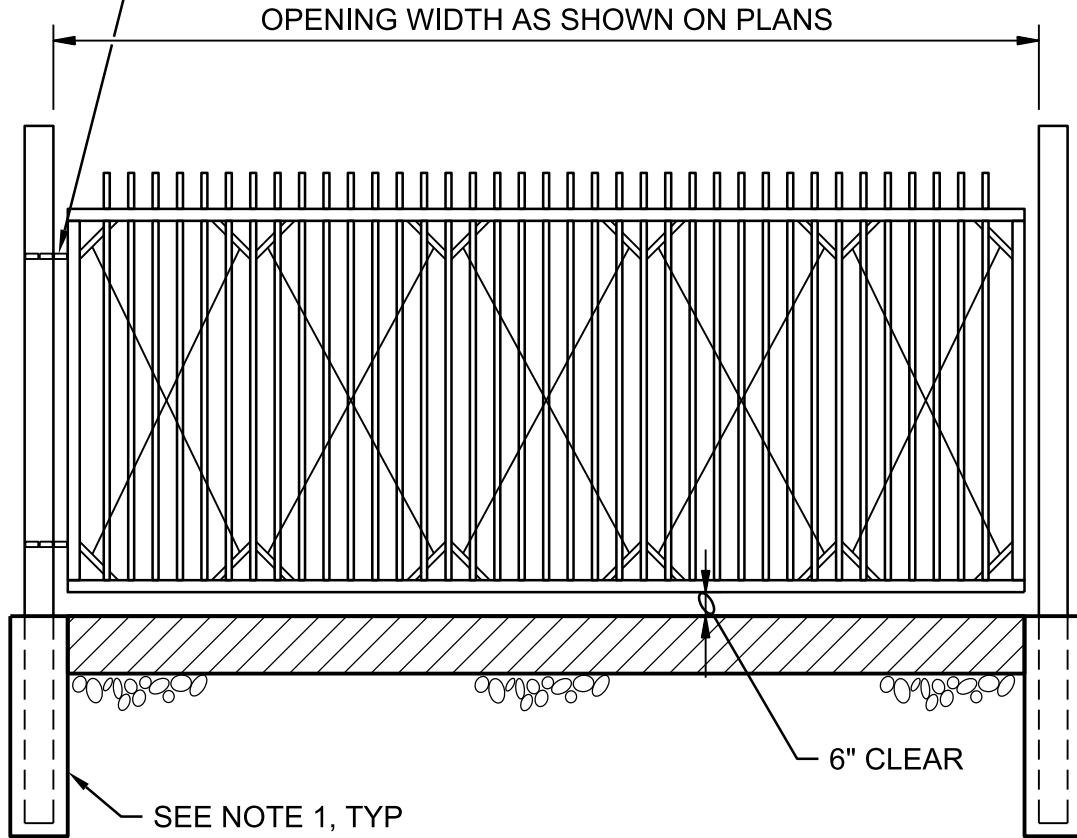
PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

3231-410



PLAN

HINGE ASSEMBLY PER
MANUFACTURER'S
RECOMENDATION



ELEVATION

NOTES:

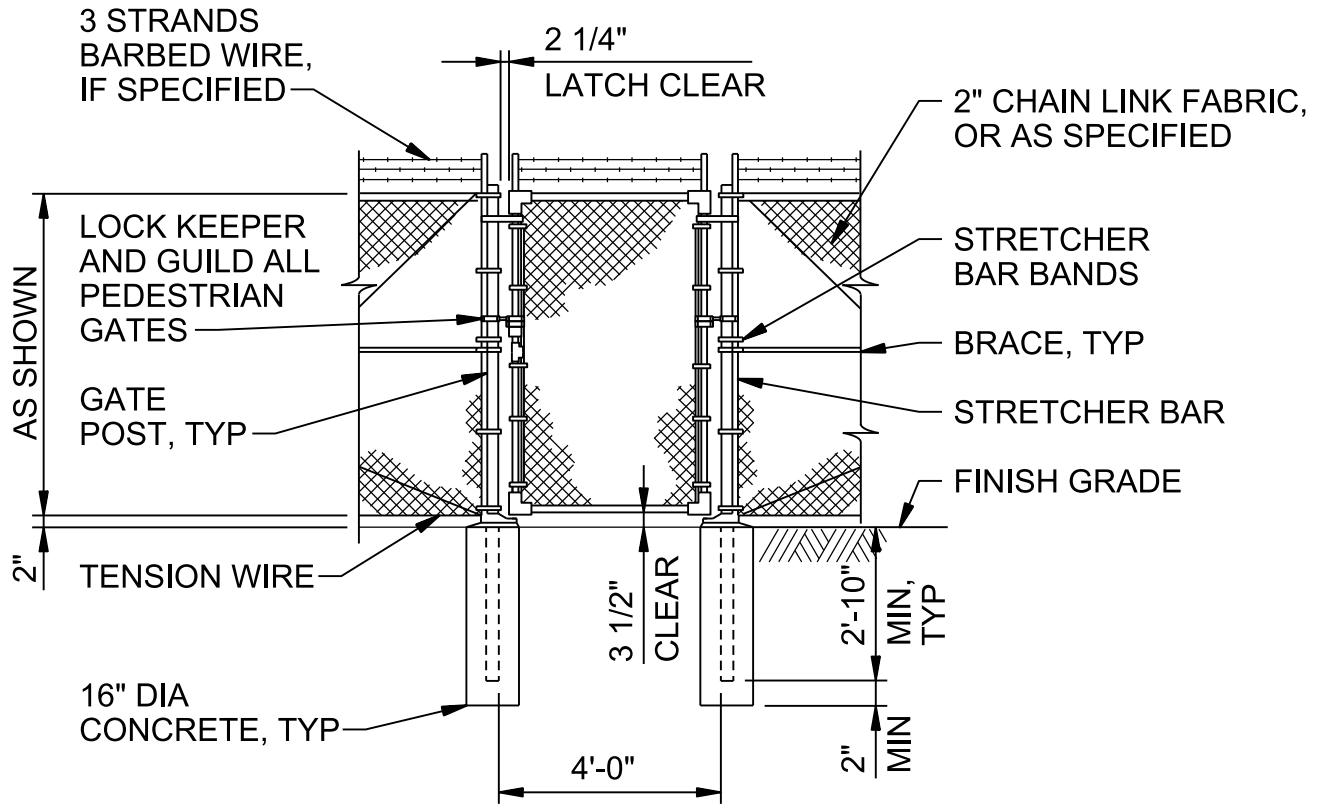
1. POST SETS AND FOUNDATION PER MANUFACTURER'S RECOMMENDATIONS FOR GATE OPENING AND GATE POST SIZES.
2. GATE FRAME, BRACING SIZES AND SPACING TO CONFORM TO ARCHITECTURAL SWING GATE PER SPECIFICATION SECTION 32 31 13 CHAIN LINK FENCES AND GATES AND TO GATE SUPPLIERS RECOMMENDATIONS.
3. EXTRA BRACING AND GATE HARDWARE TO BE PER GATE SUPPLIER'S STANDARDS.

ARCHITECTURAL SWING GATE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

3231-416

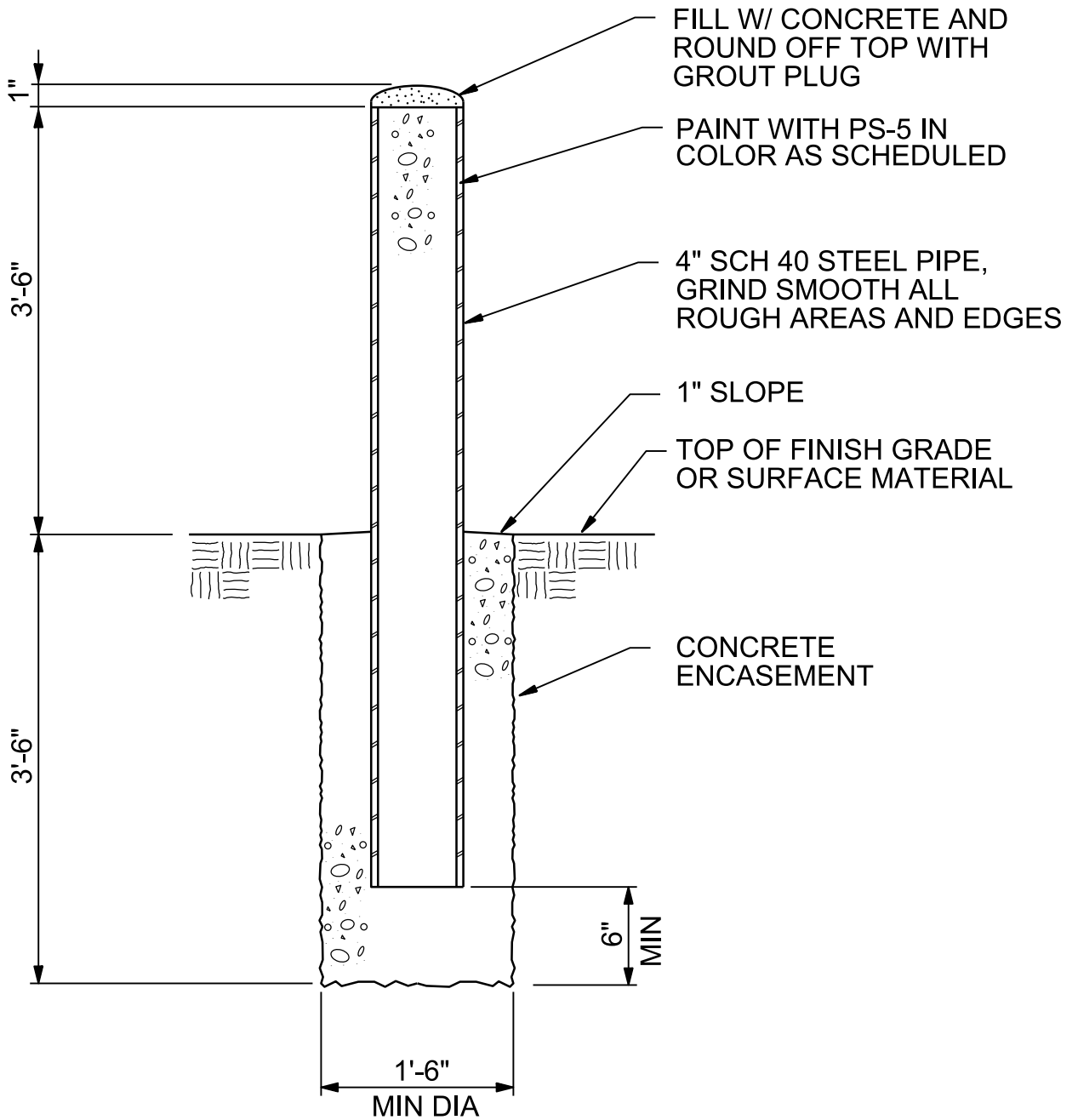


PEDESTRIAN GATE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

3231-420



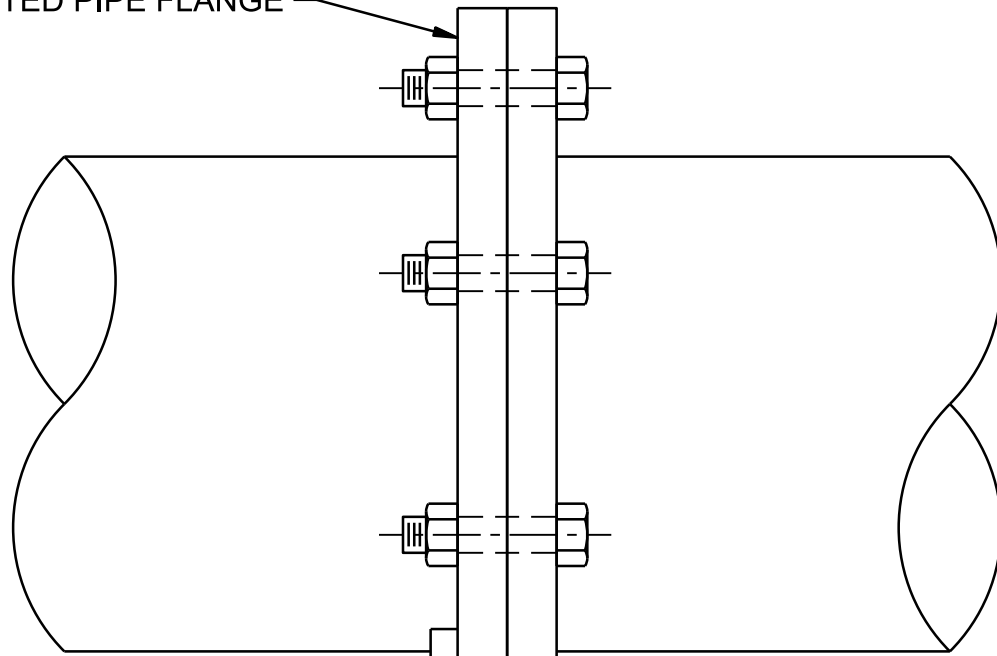
BOLLARD

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

3305-954

BOLTED PIPE FLANGE



FLANGE BOLTS

PIPE FLANGE SUPPORT
B-LINE FIG B3094

3/16

BASE STAND
B-LINE FIG B3088S

1 1/2" GROUT

(4) 1/2" DIA SST
ADHESIVE ANCHORS
WITH 6" EMBED

NOTE:

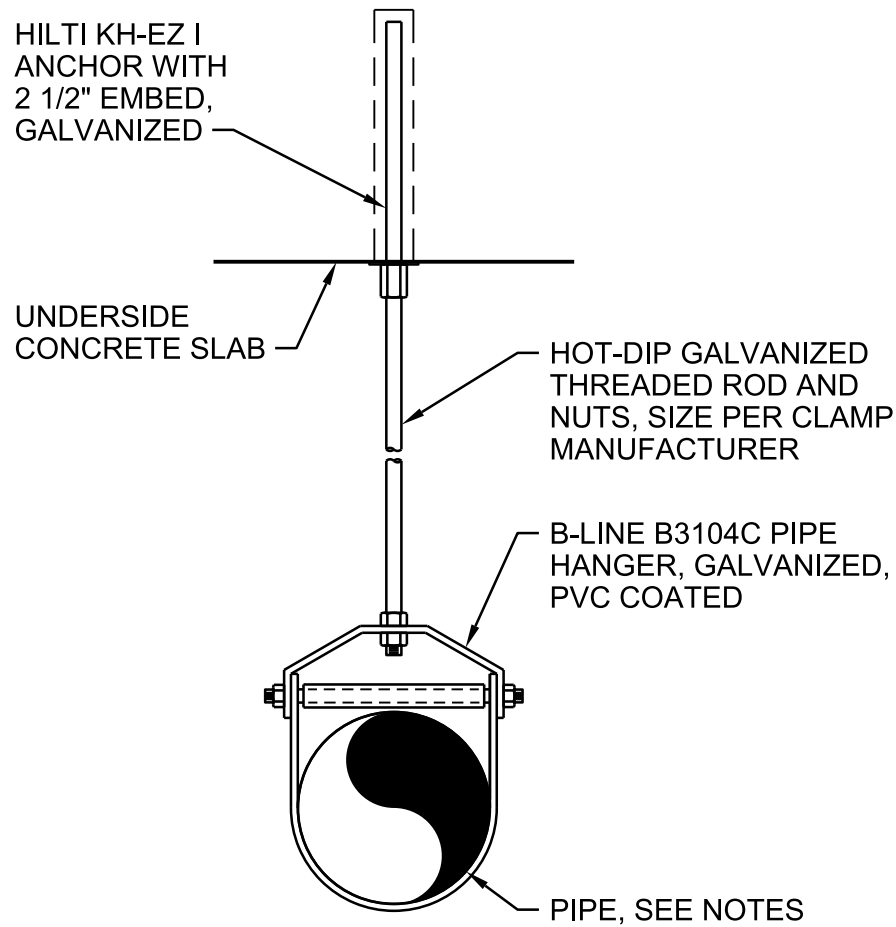
PIPE SUPPORT, BASE STAND AND BASE PLATE MATERIALS SHALL BE IN ACCORDANCE WITH THE MATERIALS LISTED BY SERVICE ON THE CONTRACT DOCUMENTS.

PIPE FLANGE SUPPORT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-502



NOTES:

1. PIPE SUPPORT FOR PIPES OF MAXIMUM 2" NOMINAL DIAMETER.
2. SUPPORT PIPES AT MAXIMUM 5 FEET ON CENTER AND WITHIN 1 FOOT EACH SIDE OF ALL BENDS AND ELBOWS.

PIPE SUPPORT HANGER - SMALL DIAMETER

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-522

BENT PL 3/16" x 3" x CONT
STRAP WITH END PLATE
3"x3"x3/8" EA END

1/4"x6" NEOPRENE
SHEET BETWEEN
DUCT AND PLATE

L 4"x4"x3/8"x0'-3"

1/4

VARIES

1 1/4" MINIMUM

TYPE IL NS GROUT

(8) 5/8" SST
DRILL-IN ADHESIVE
ANCHORS @ 7" GA

TYP $\frac{3}{16}$
 $\frac{3}{16}$

SECTION

DUCT CL ELEVATION,
SEE DWGS

SADDLE PLATE 3/8"x6"
BENT TO OD OF DUCT +1/2"

PL 3/8"

PL 3/8"x6" EA END
OF SADDLE

BASE PLATE
1/2" x 10" x REQD

PL 3/8"x3" STIFFENERS
EA SIDE OF SADDLE

60°

3" TYP

FRP DUCT

5/8" DIA BOLT, PROVIDE
STEEL PLATE 3"x3"
WASHER SHIM PACK SO
BOLT CAN BE TIGHTENED
WITH STRAP SNUG ON DUCT

CONCRETE
SLOPES VERIFY
ELEVATION IN FIELD

3 1/2"
TYP

ELEVATION

NOTE:

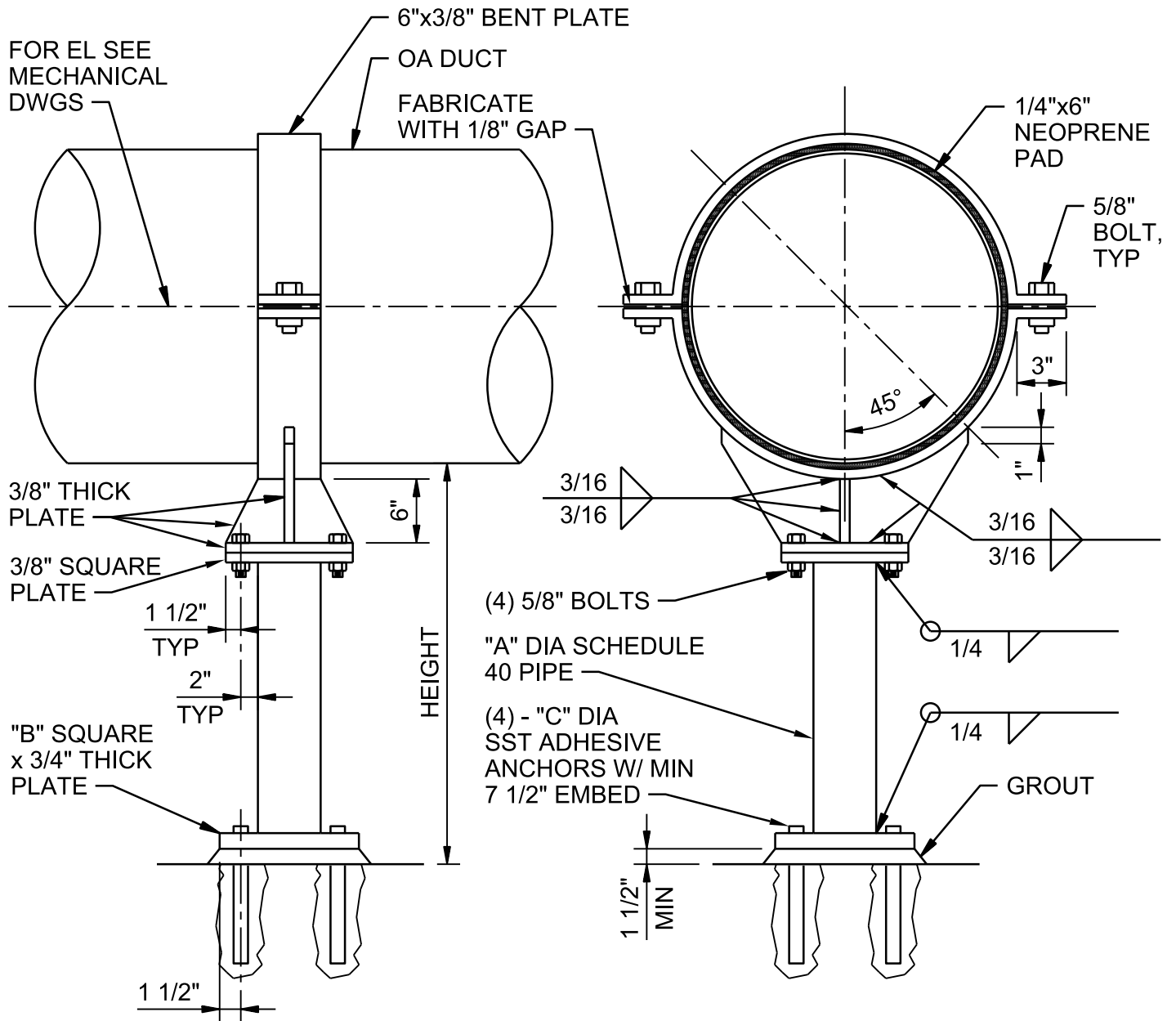
1. ALL MATERIALS TO BE HOT-DIP GALVANIZED STEEL UNLESS NOTED OTHERWISE.

FRP DUCT SUPPORT DETAIL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-526



DUCT HEIGHT	"A"	"B"	"C"
UNDER 3'-0"	3"	8"	5/8"
FROM 3'-0" TO 5'-0"	4"	10"	5/8"
FROM 5'-0" TO 9'-0"	6"	12"	3/4"

NOTE:

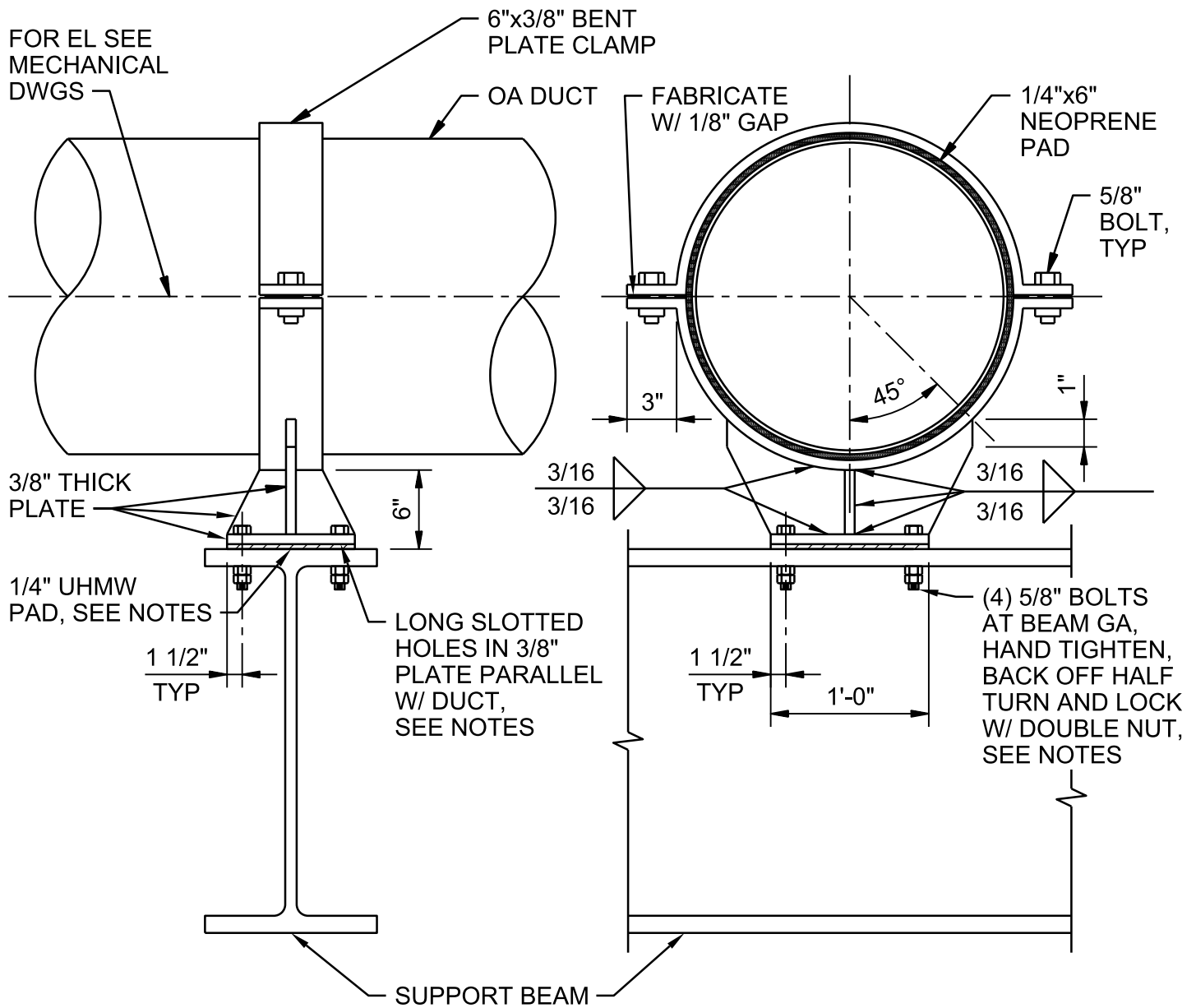
ALL STEEL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.

FRP DUCT SUPPORT DETAIL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4005-527



NOTES:

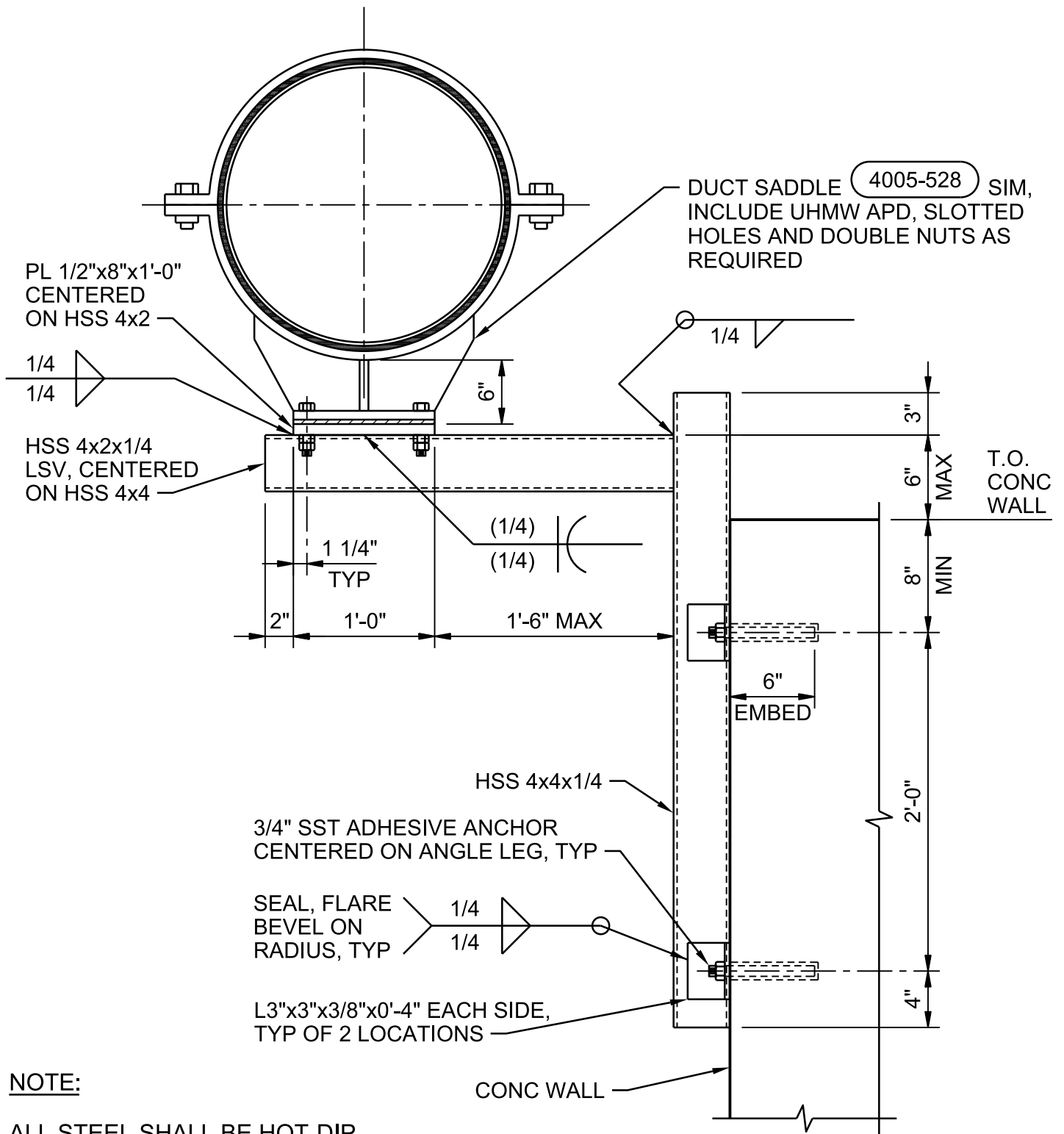
1. ALL STEEL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.
2. ULTRA HIGH MOLECULAR WEIGHT (UHMW) BEARING PAD SHALL BE TIVAR DRYSLIDE OR EQUAL.
3. UHMW PAD, LONG SLOTTED HOLES AND DOUBLE NUT IS TYPICAL. WHERE DRAWINGS INDICATE SUPPORT AS FIXED, (F), OMIT PAD, PROVIDE STANDARD HOLES AND SNUG TIGHT ALL BOLTS.

DUCT SUPPORT SADDLE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4005-528



NOTE:

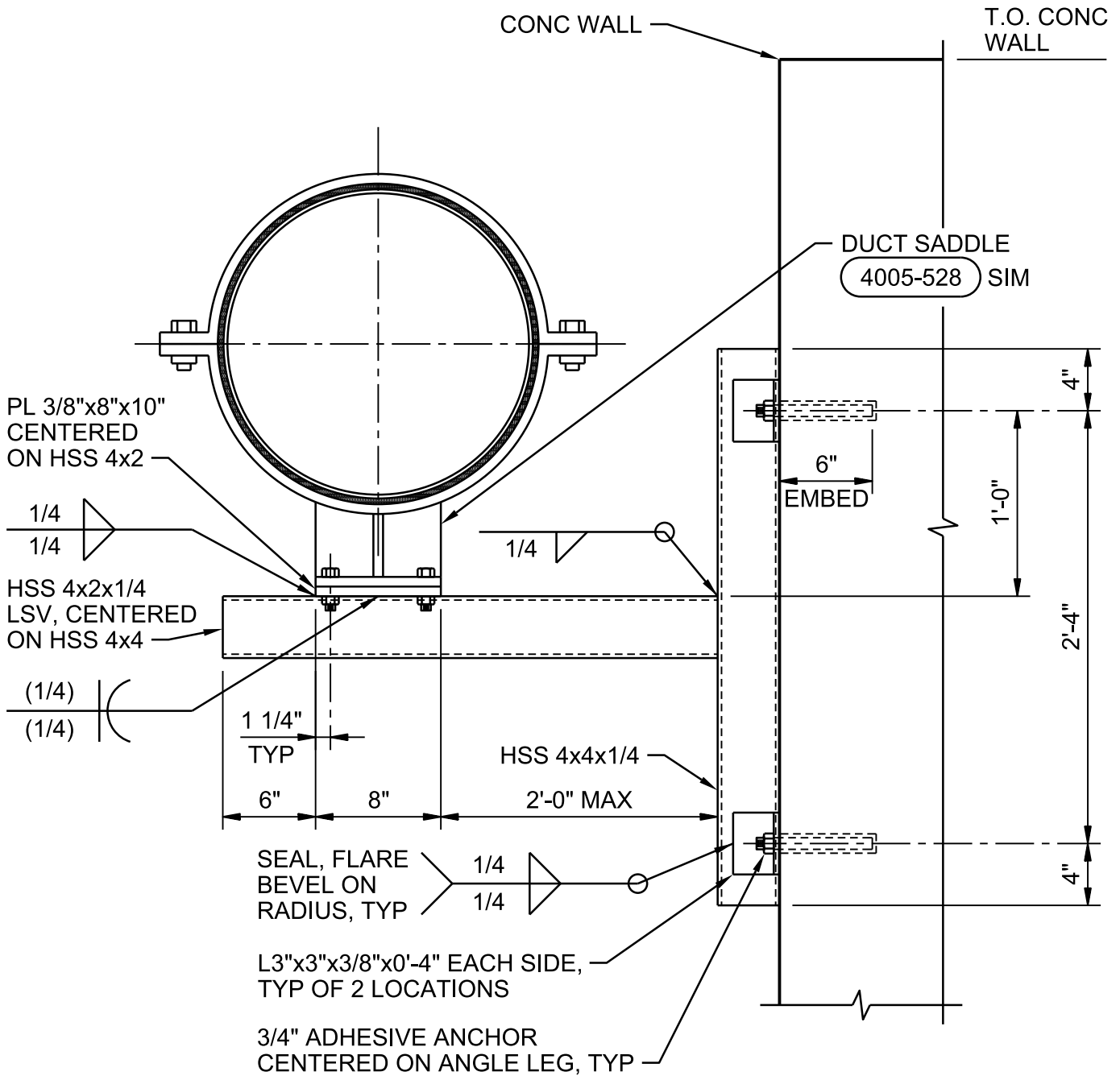
ALL STEEL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.

DUCT SUPPORT AT WALL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-529



NOTE:

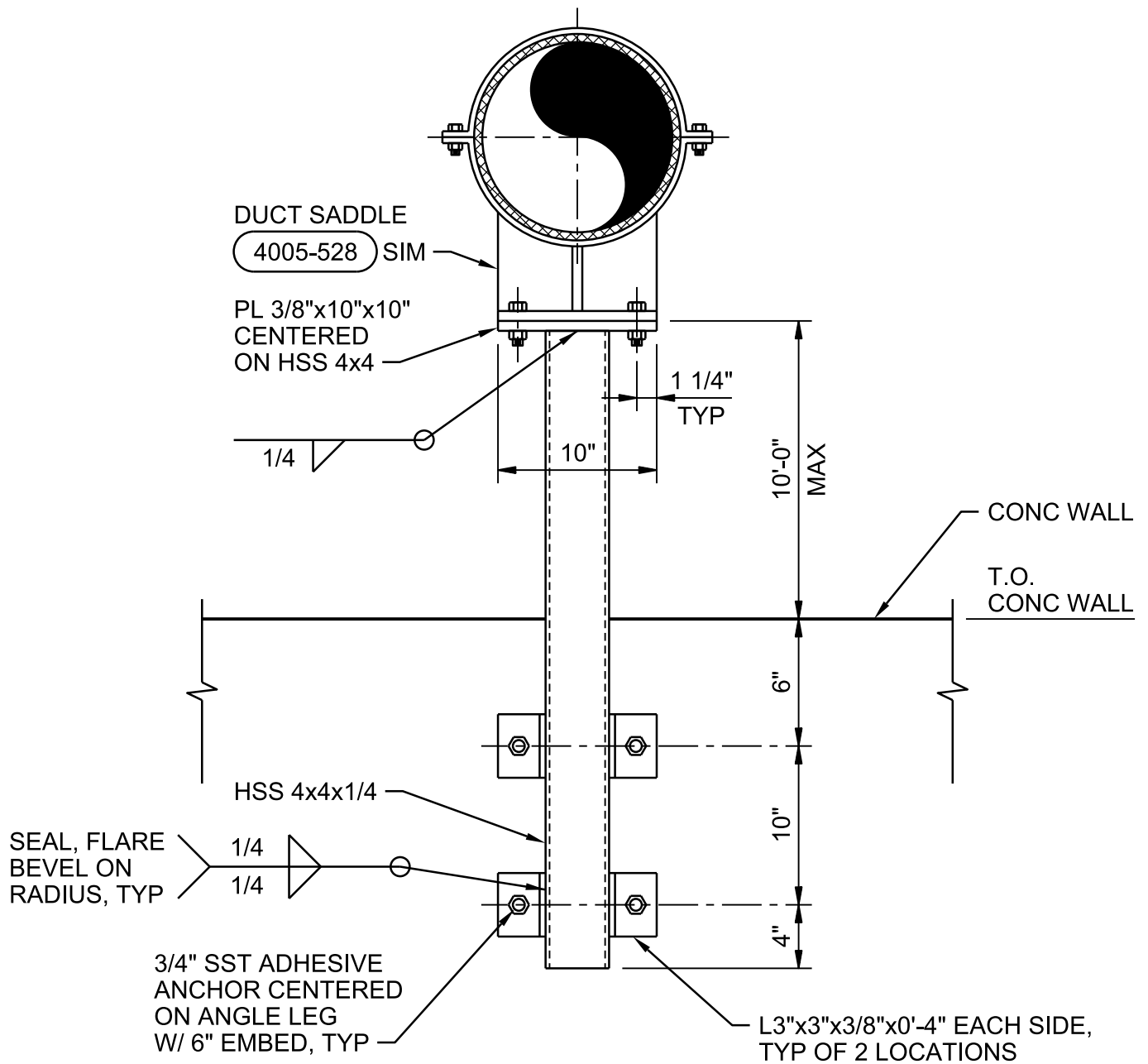
ALL STEEL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.

DUCT SUPPORT AT WALL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-530



NOTE:

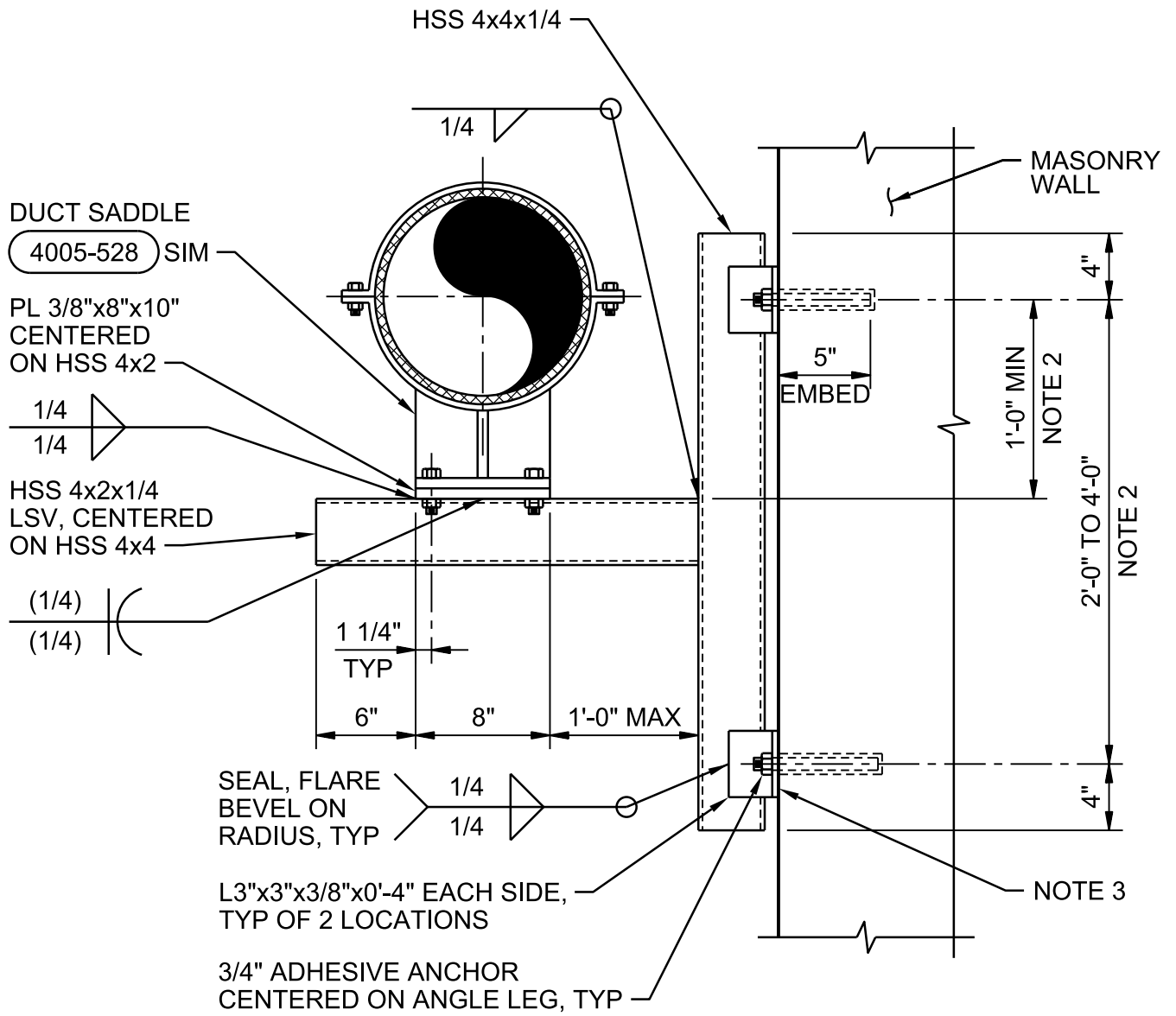
ALL STEEL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.

DUCT SUPPORT AT WALL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4005-531



NOTE:

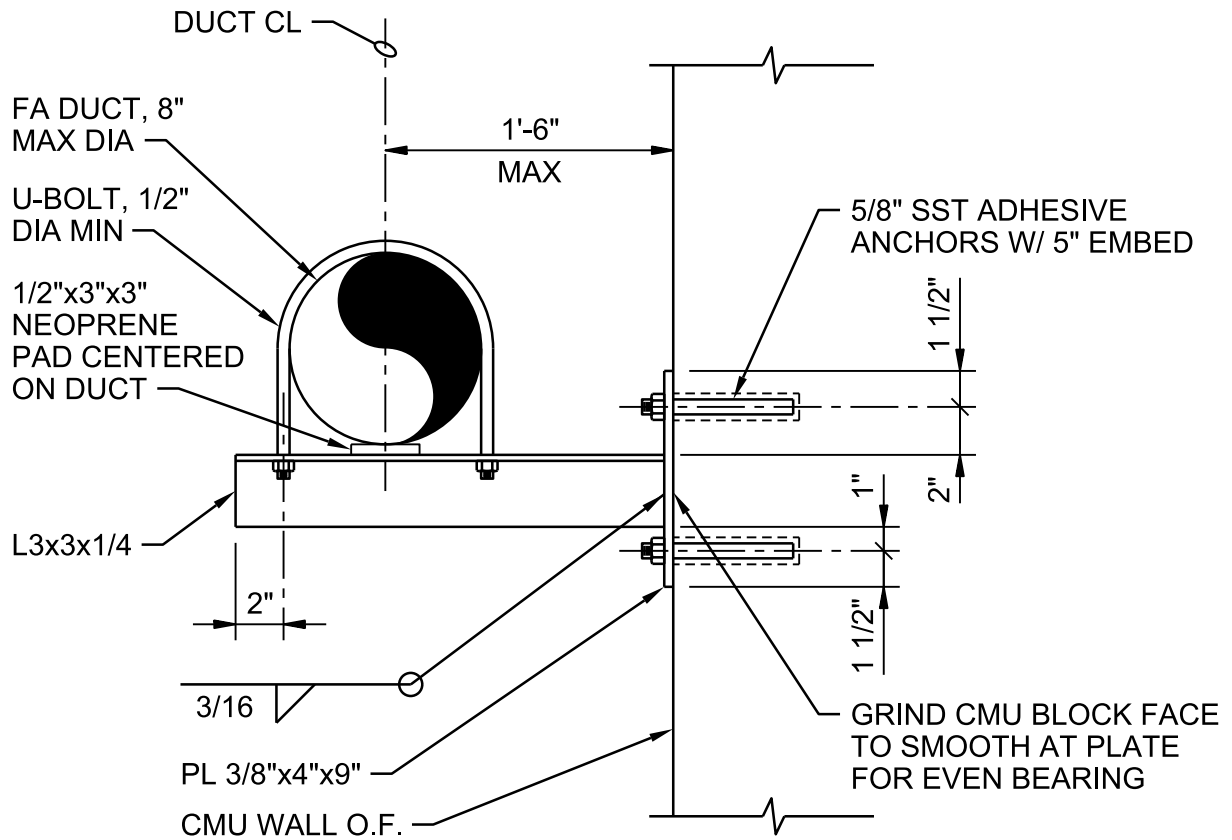
1. ALL STEEL SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION.
2. FIELD LOCATE GROUTED BOND BEAMS AND ADJUST DIMENSIONS AS REQUIRED TO LOCATE ANCHORS AT CENTER OF GROUTED BOND BEAMS.
3. GRIND SPLIT-FACE MASONRY SURFACE TO SMOOTH AT BEARING OF ANGLE LEGS.

DUCT SUPPORT AT MASONRY WALL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-532

**NOTE:**

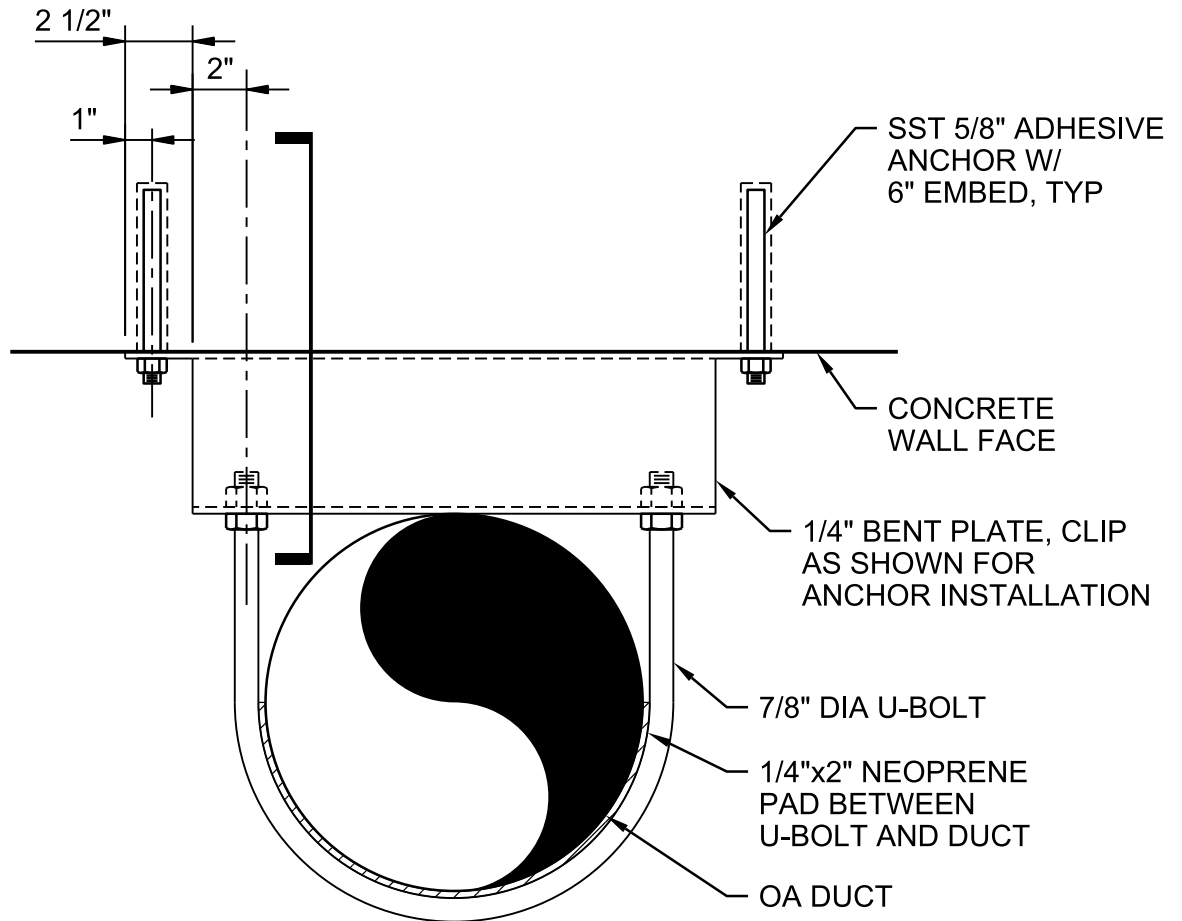
1. LOCATE SUPPORT TO ANCHOR AT GROUTED CELLS ONLY. LOCATE REINFORCED CELLS WITH NON-DESTRUCTIVE TESTING METHODS. AVOID REINFORCING DURING ANCHOR INSTALLATION.
2. ALL MATERIAL SHALL BE HOT-DIP GALVANIZED UNLESS OTHERWISE INDICATED.

DUCT SUPPORT AT MASONRY WALL

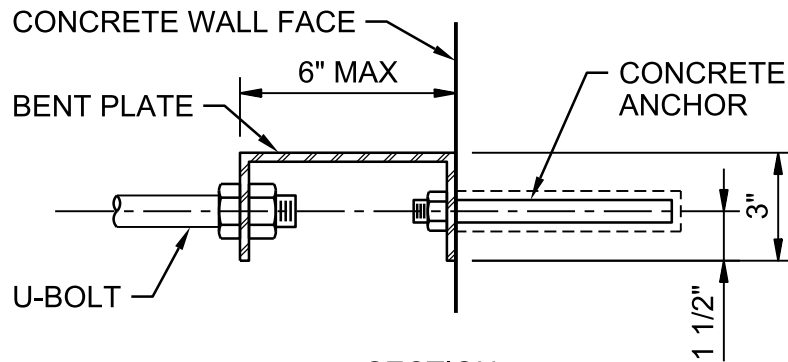
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-533



PLAN



SECTION

NOTE:

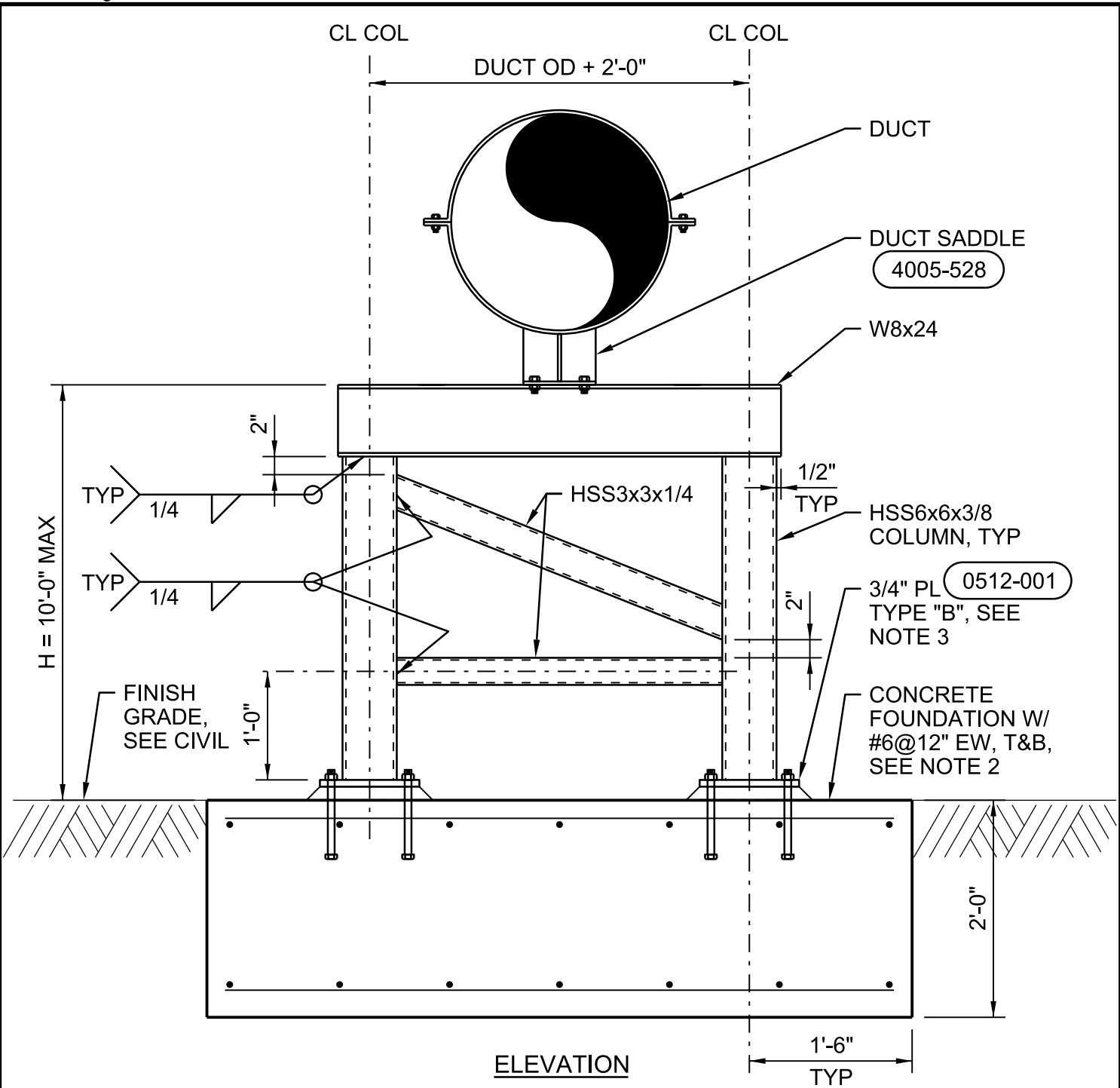
ALL MATERIALS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION UNLESS INDICATED OTHERWISE.

DUCT SUPPORT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-534



NOTES:

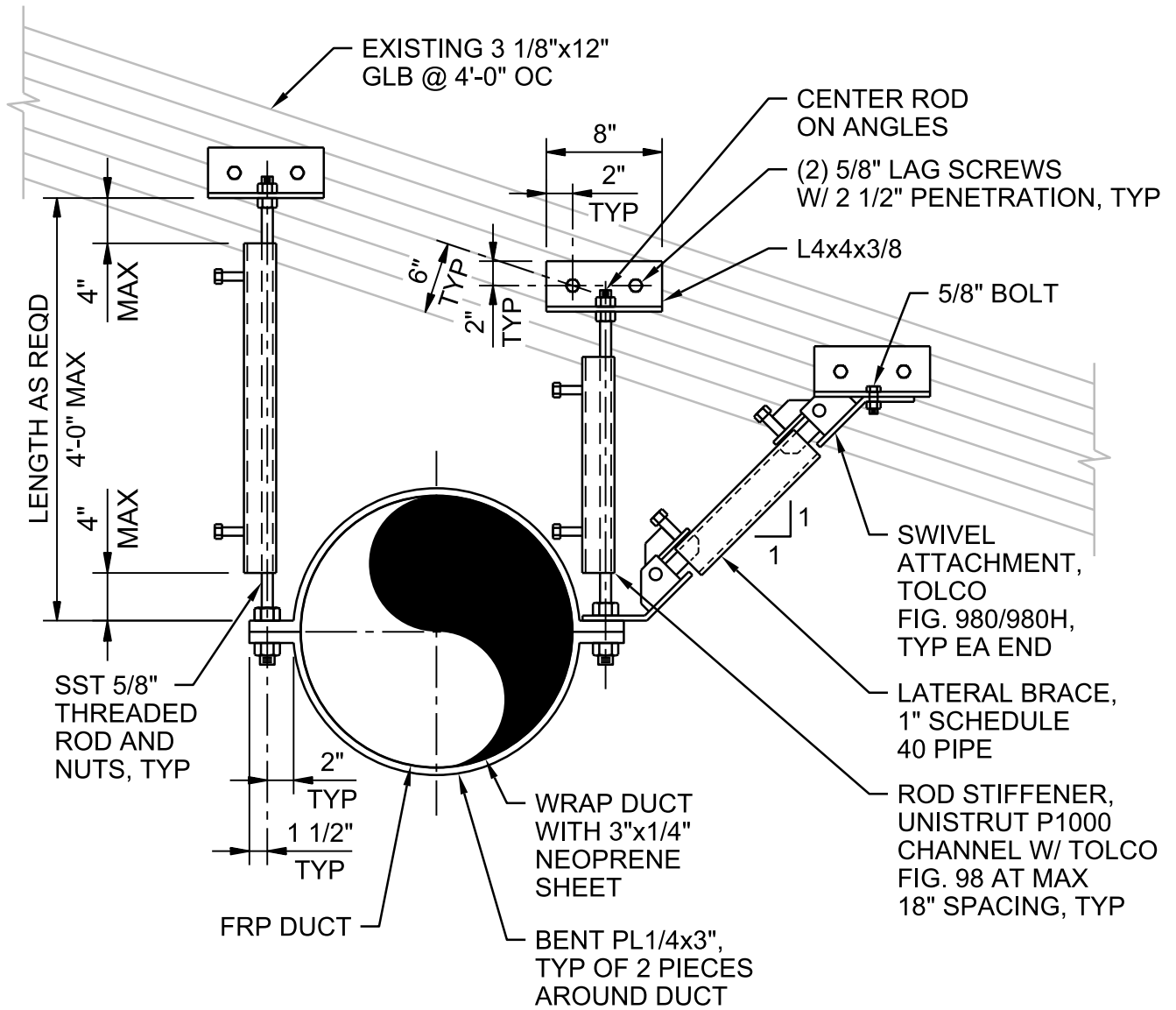
1. ALL MATERIALS ARE GALVANIZED STEEL. GALVANIZE AFTER FABRICATION.
2. FOUNDATION LENGTH IS 6'-0" WITH SUPPORT FRAME CENTERED ON FOOTING.
3. FOR SUPPORT ON TOP OF CONCRETE STRUCTURE, USE ADHESIVE ANCHORS WITH 9" MINIMUM EMBEDMENT.

DUCT SUPPORT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-535



NOTES:

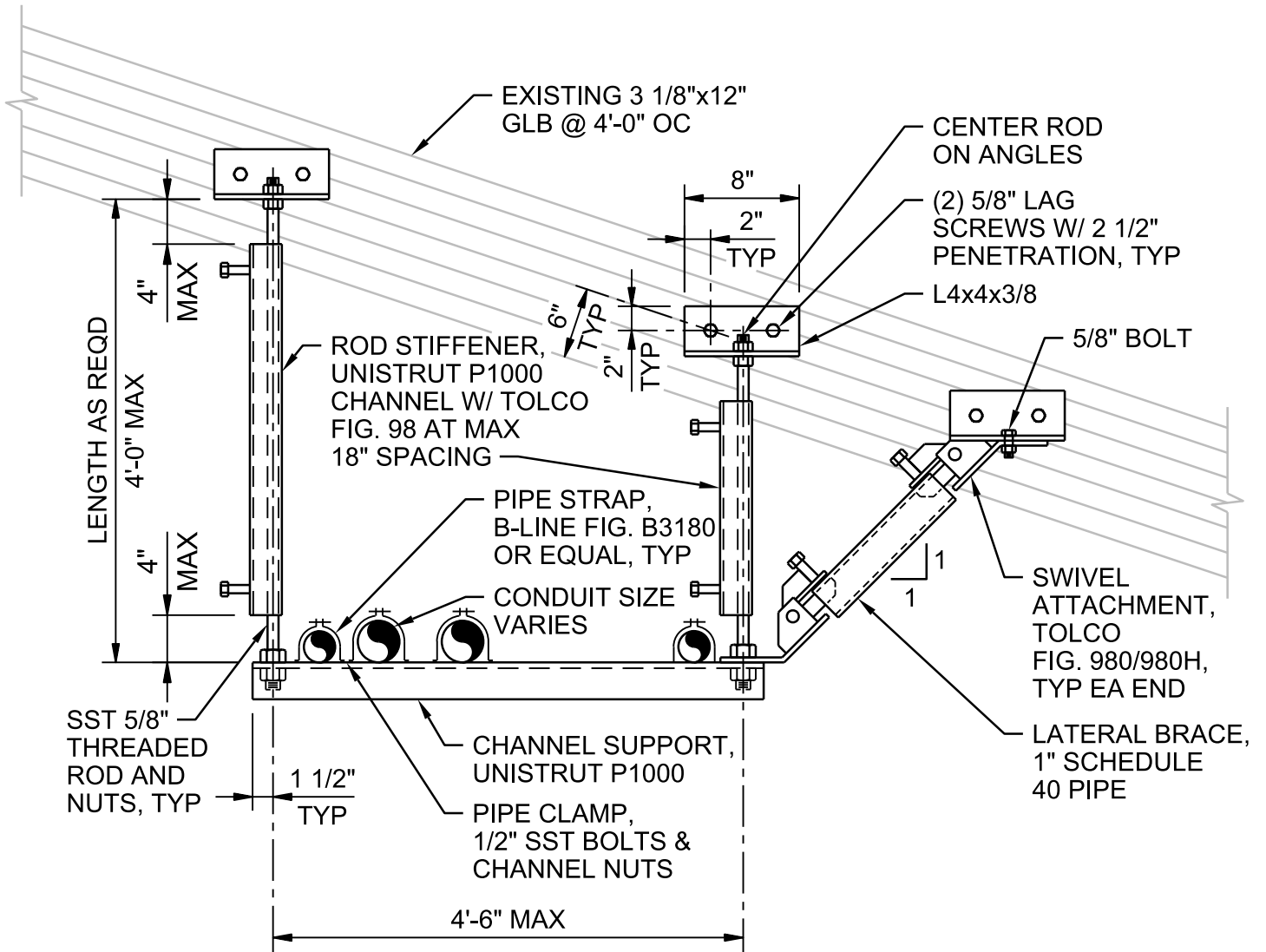
1. MATERIALS SHALL BE GALVANIZED UNLESS INDICATED AS STAINLESS STEEL.
2. VERIFY DUCT OUTSIDE DIAMETER AND ELEVATION FOR SUPPORT FABRICATIONS.

DUCT SUPPORT DETAIL

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4005-540



NOTES:

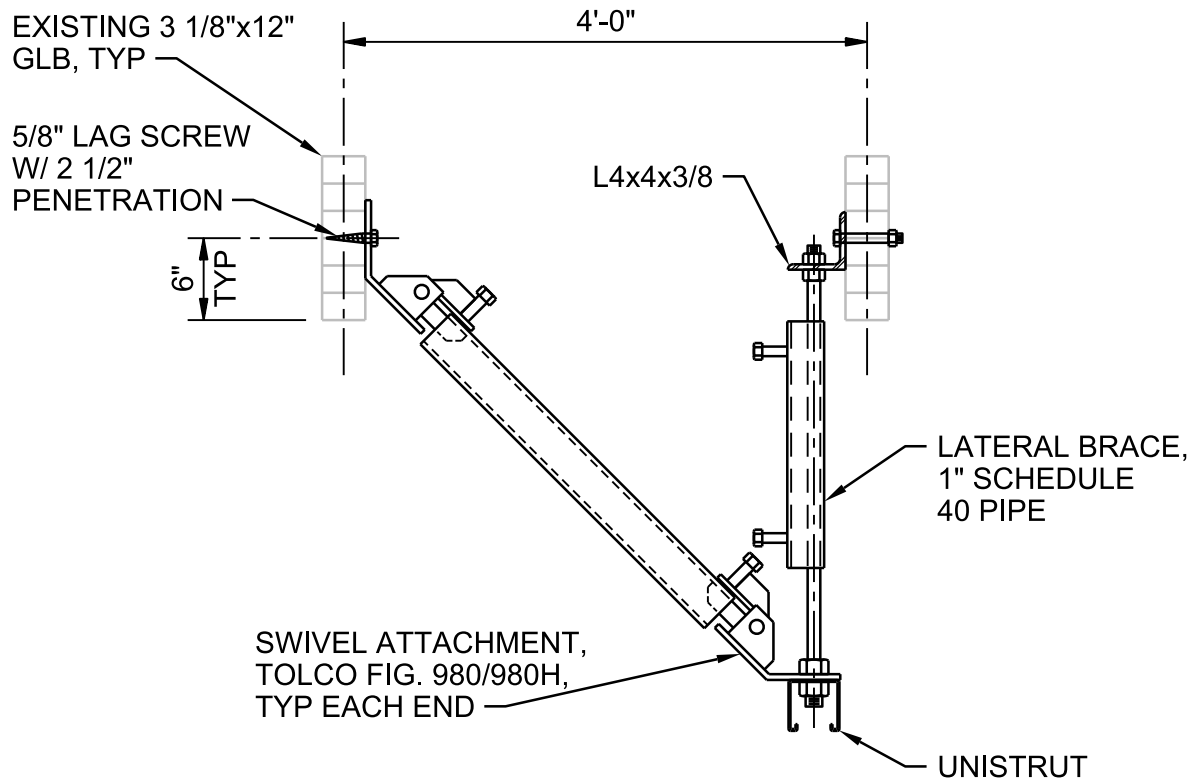
1. MATERIALS SHALL BE GALVANIZED UNLESS INDICATED AS STAINLESS STEEL.
2. FOR PLASTIC PIPE PROVIDE PIPE PROTECTION BARRIER.

TRAPEZE PIPE HANGER

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4005-541



NOTES:

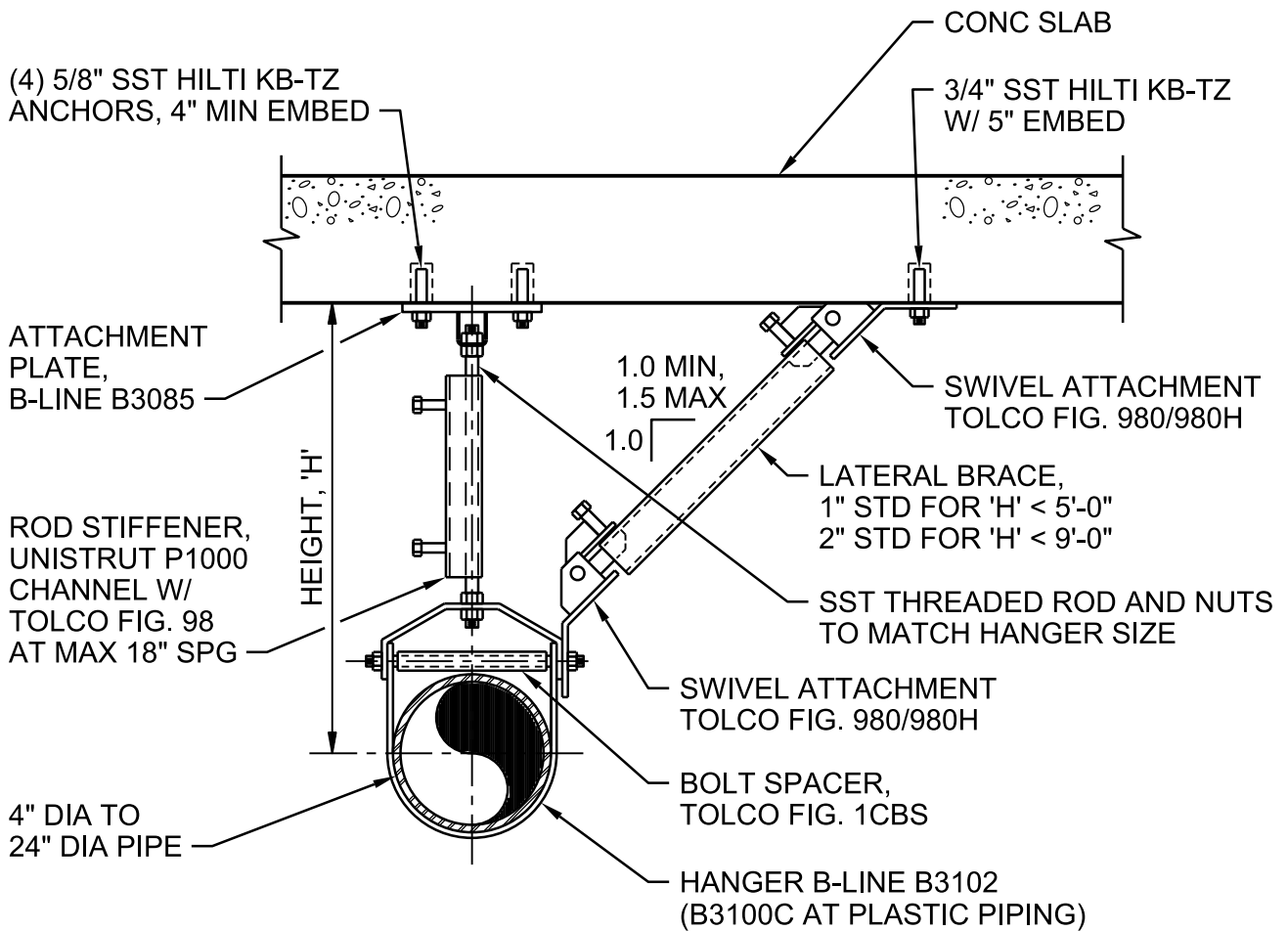
1. MATERIALS SHALL BE GALVANIZED UNLESS INDICATED AS STAINLESS STEEL.
2. FOR INFORMATION NOT SHOWN, SEE STANDARD DETAILS 4005-540 AND 4005-541.

ROOF HANGER - LONGITUDINAL BRACE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-542

**NOTE:**

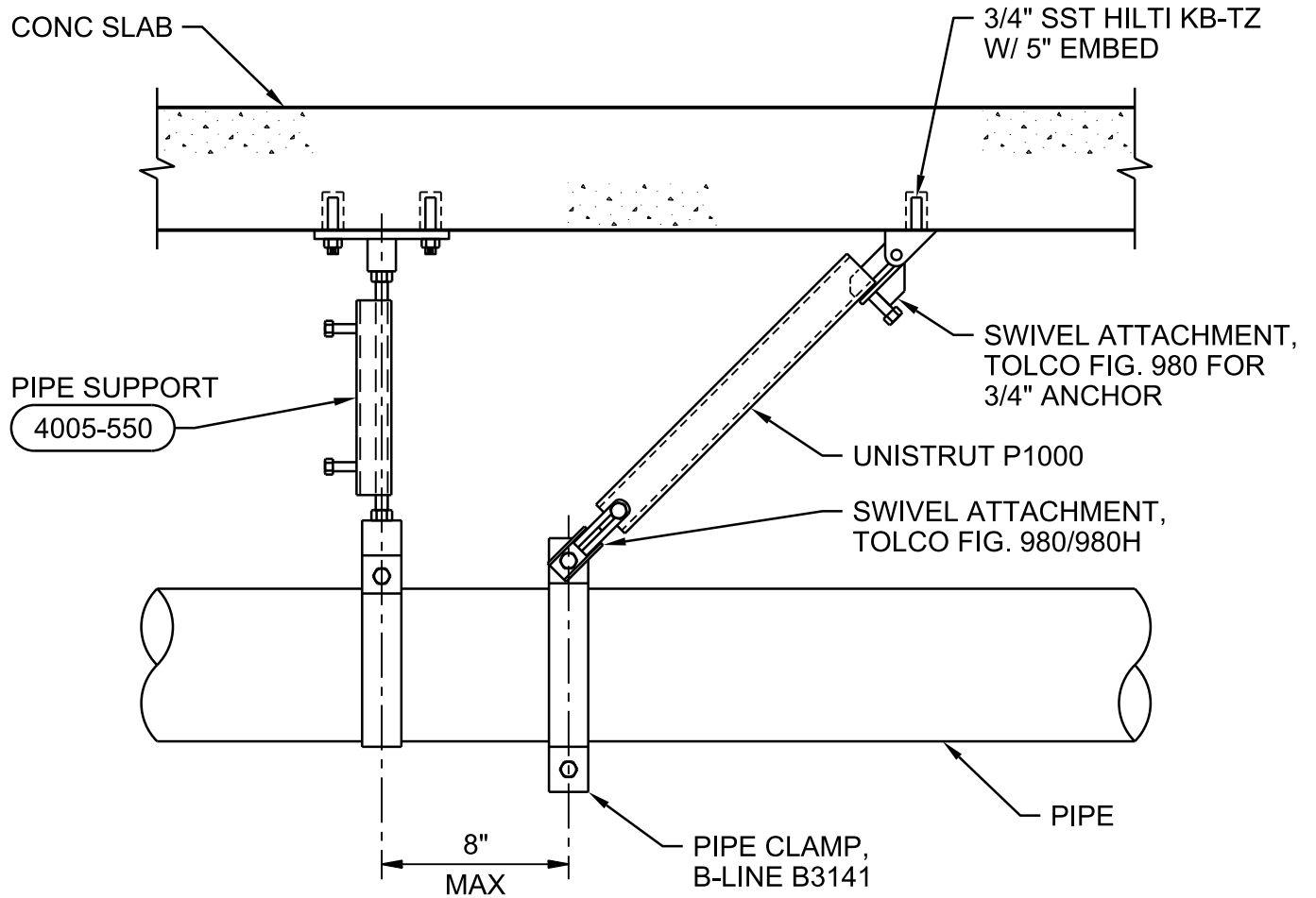
MATERIALS SHALL BE GALVANIZED UNLESS INDICATED AS STAINLESS STEEL.

OVERHEAD PIPE HANGER

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-550



NOTES:

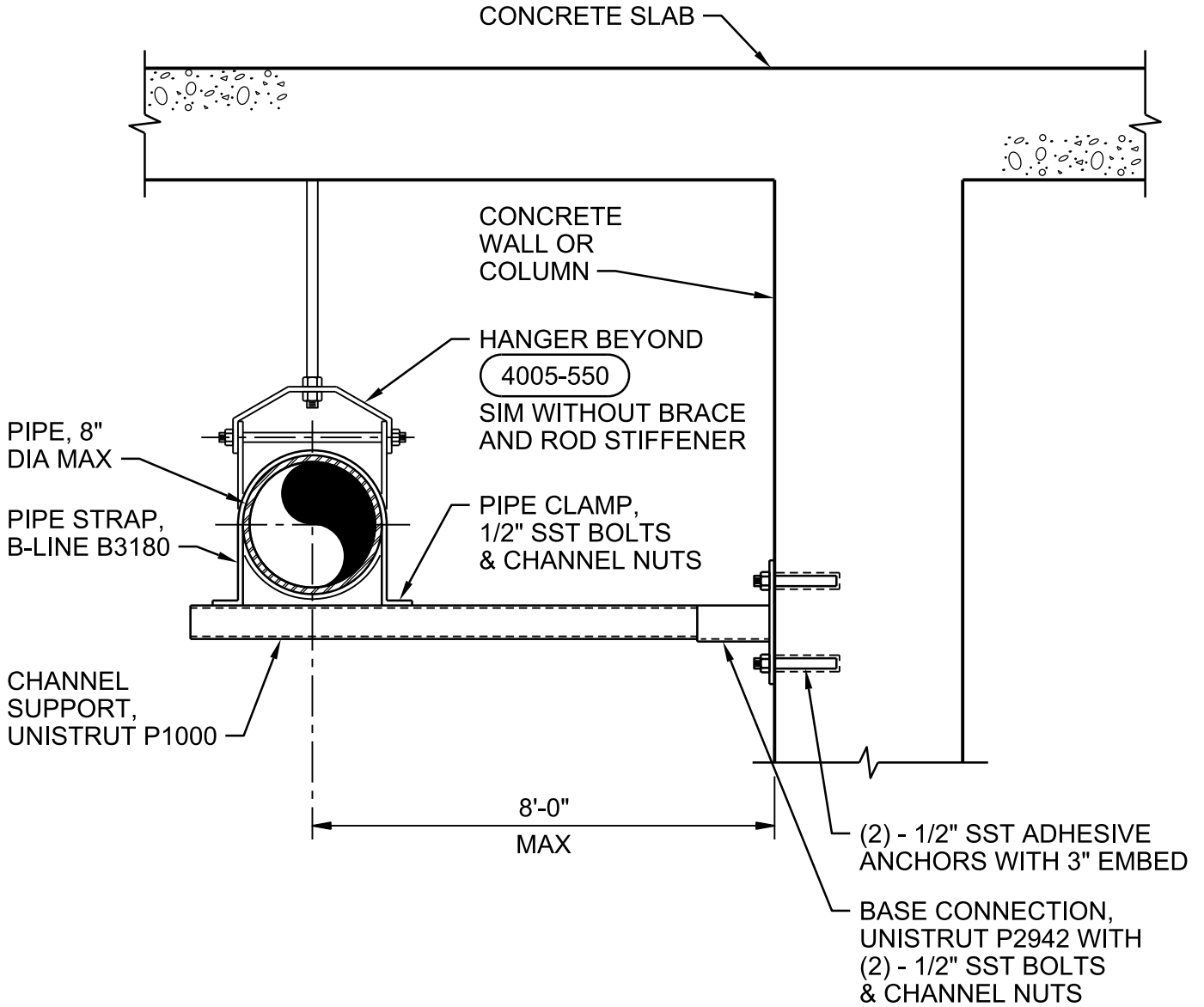
- 1. MATERIALS SHALL BE GALVANIZED UNLESS INDICATED AS STAINLESS STEEL.

PIPE LONGITUDINAL BRACE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4005-551

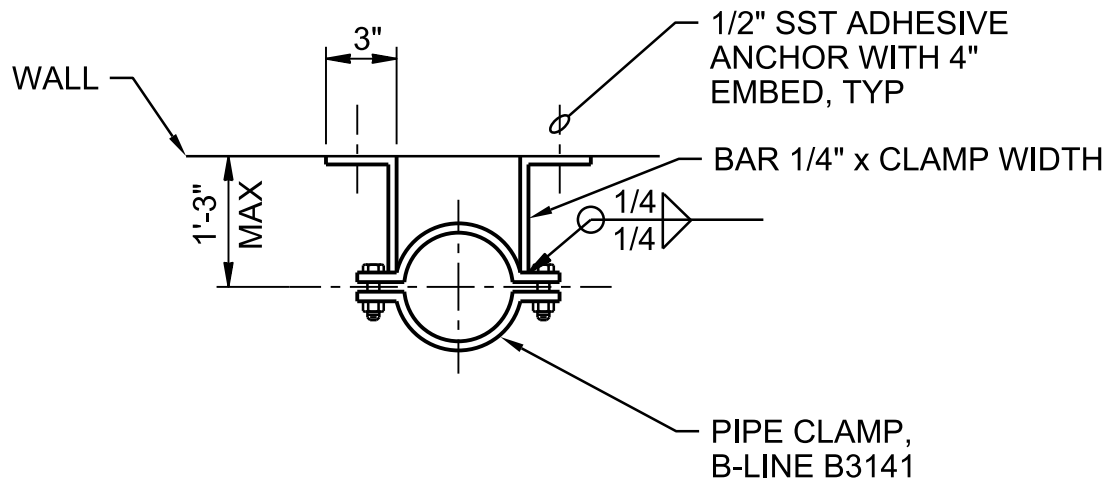


PIPE SUPPORT BRACE TO WALL

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-552



NOTES:

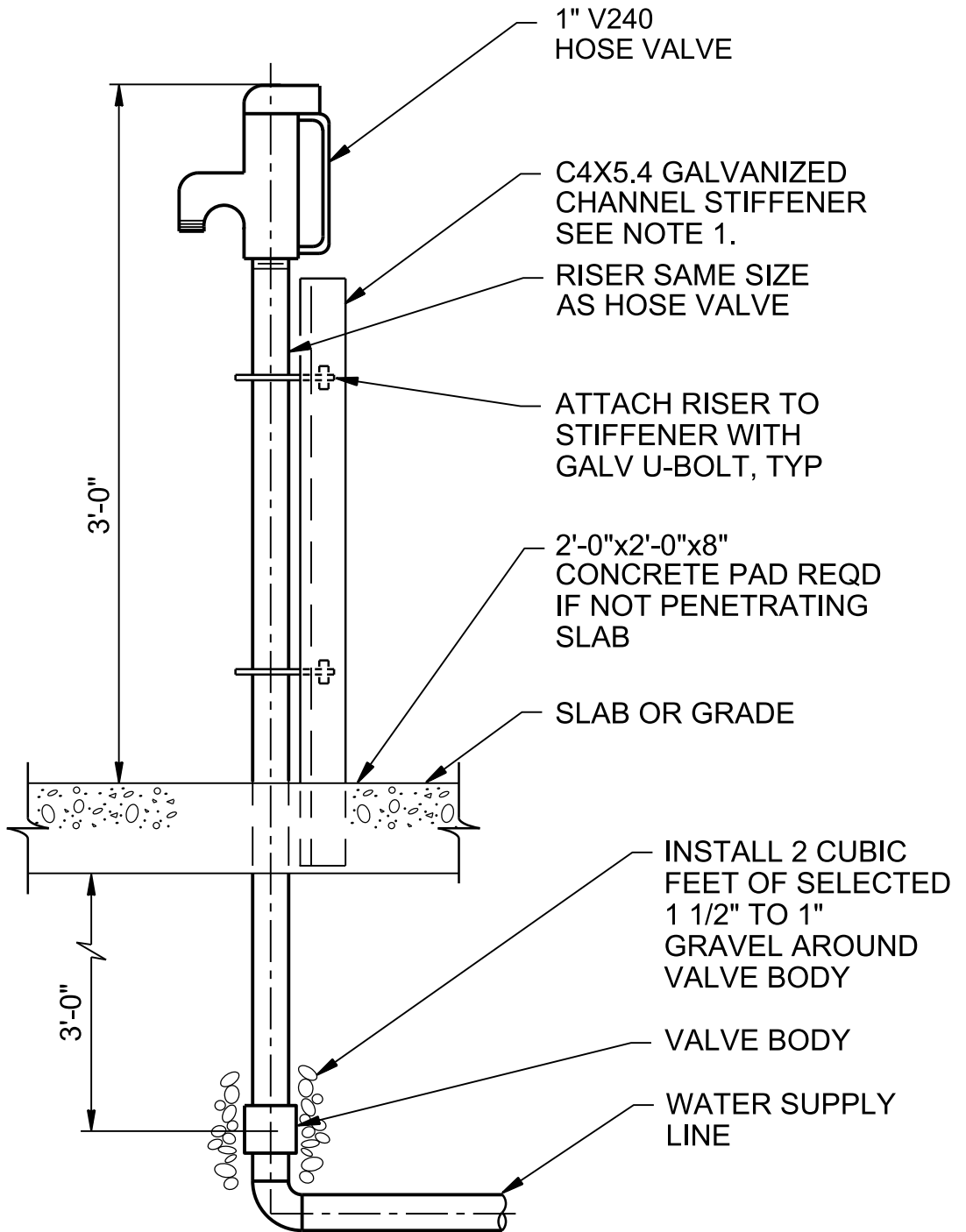
1. HOT DIP GALVANIZE AFTER FABRICATION.

TYPE B PIPE SWAY BRACE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4005-711



NOTES:

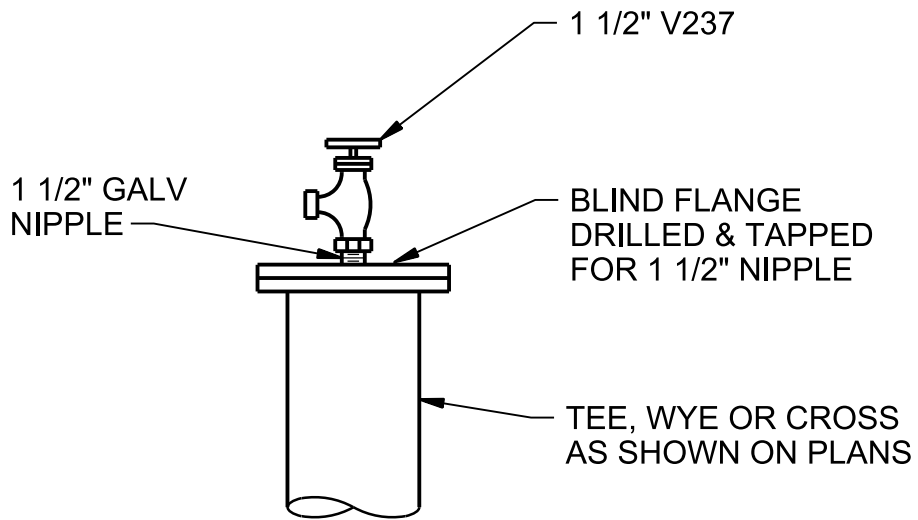
1. CHANNEL STIFFENER AND RISER ATTACHMENT HARDWARE SHALL BE IN THE AREA CLASSIFICATION TABLE ON DRAWING 01-G-024.

NON-FREEZE POST HYDRANT

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4027-154

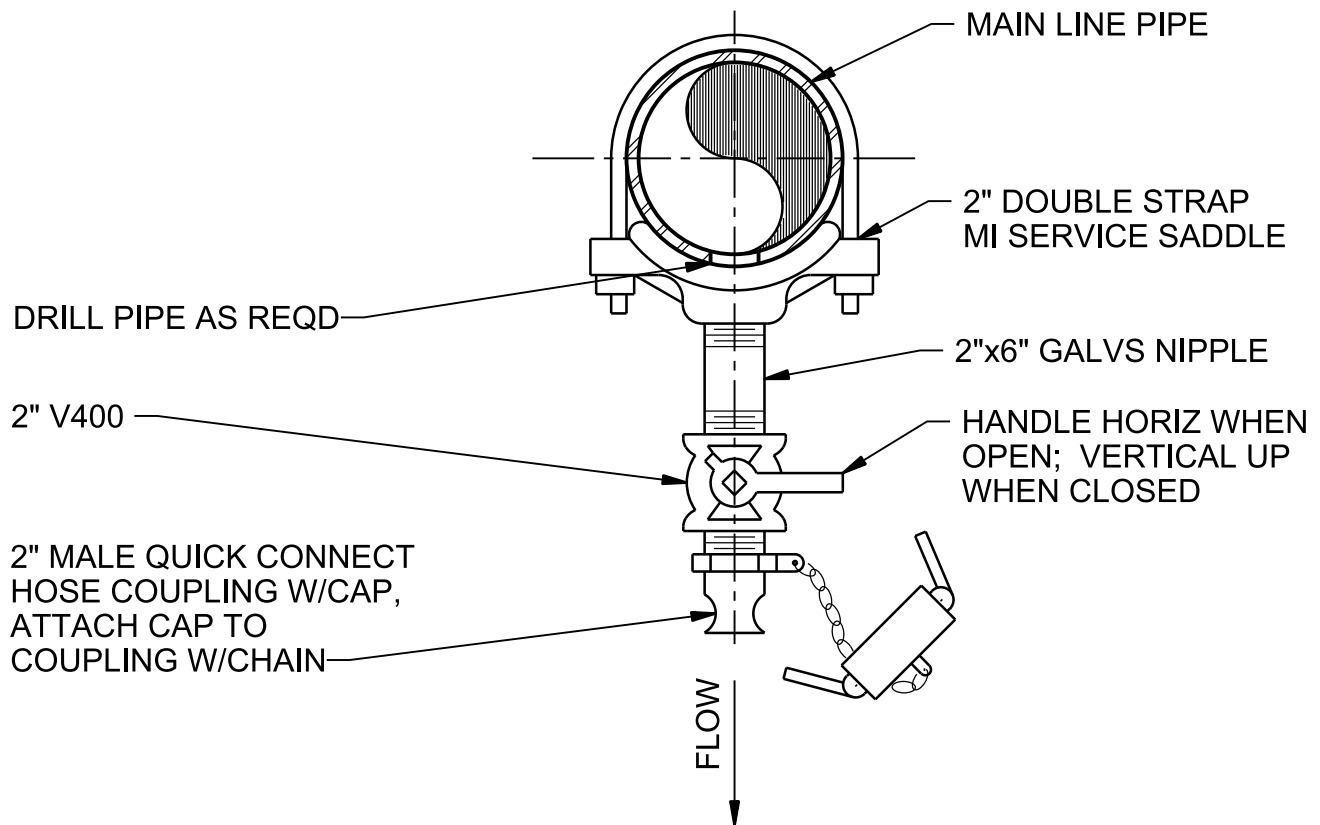


TYPE 2 FLUSHING CONNECTION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-182

**NOTES:**

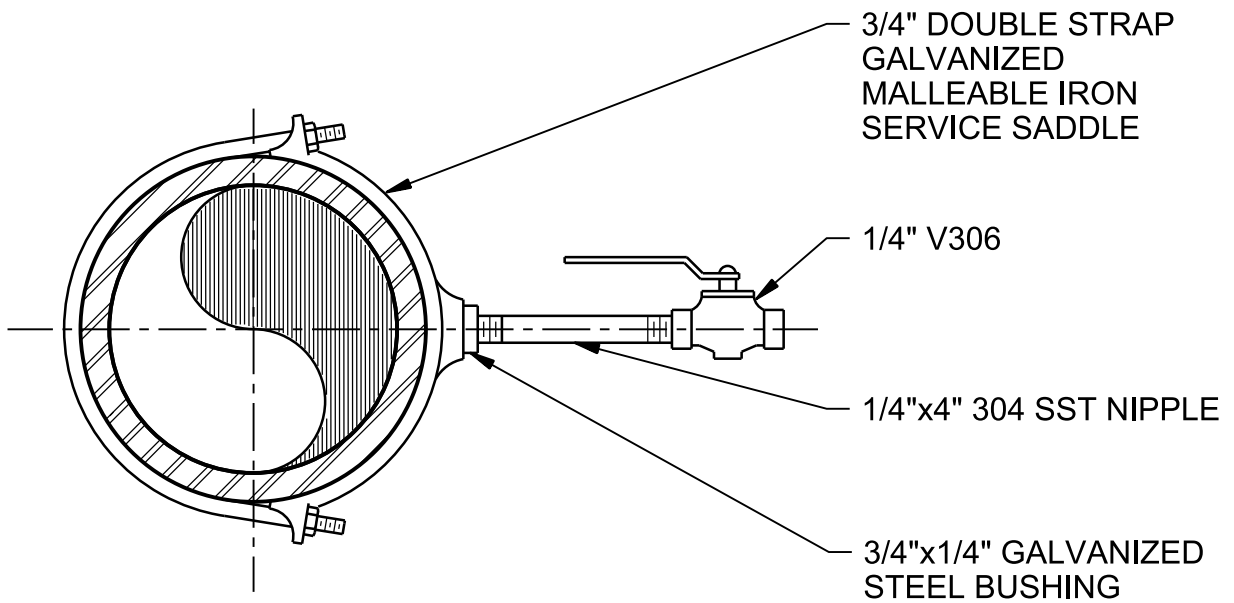
1. FOR LINE SIZE 2" AND SMALLER, FITTINGS AND VALVES SHALL BE SAME SIZE AS LINE.

LINE DRAIN VALVE INSTALLATION

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4027-191



PRESSURE TEST POINT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-194

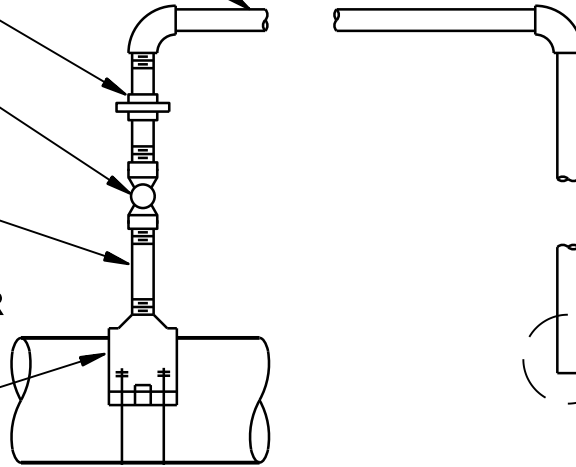
1" GALV STEEL
VENT PIPE UNLESS
NOTED OTHERWISE

UNION

1" V300
BALL VALVE

GALV STEEL
NIPPLE

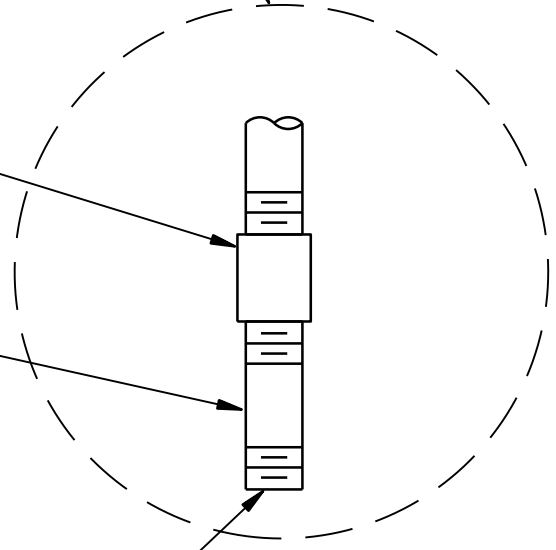
DOUBLE STRAP
SERVICE SADDLE
FOR CLDI PIPE OR
THRED-O-LET
WELDED TO
STEEL PIPE



NPT x NPT
COUPLING

CAST BRASS NPSM x NPT,
MALE x MALE,
NIPPLE ADAPTER
WITH HEXAGONAL
WRENCH FEATURE.

ROUTE TO HUB DRAIN OR
SCUPPER IF WITHIN 20-FEET,
IF FURTHER THAN 20-FEET
HORIZONTAL DISTANCE
FROM VENT CONNECTION
TERMINATE 3'-0" ABOVE FLOOR

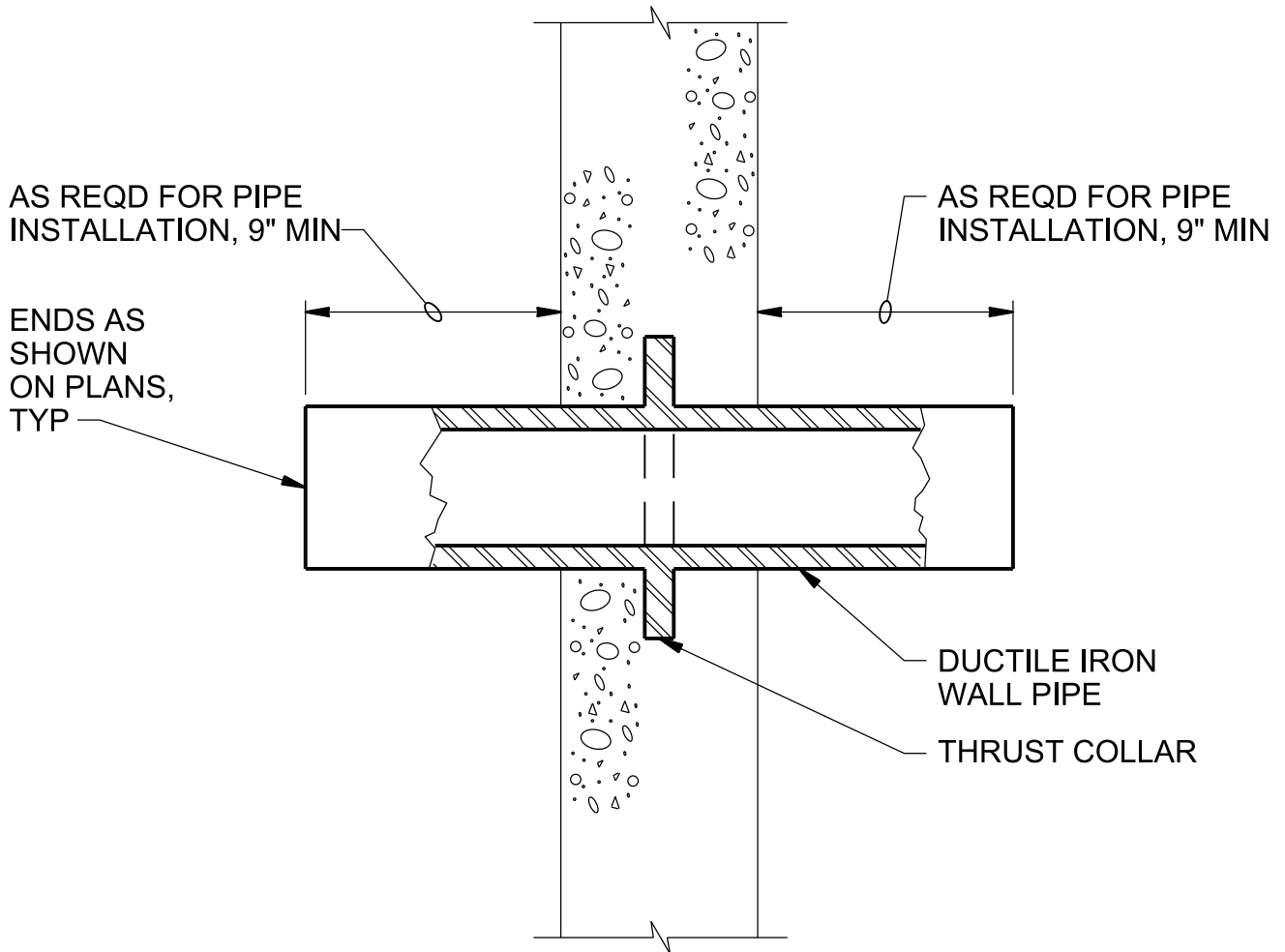


PIPE HIGH POINT VENT

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-205



NOTES:

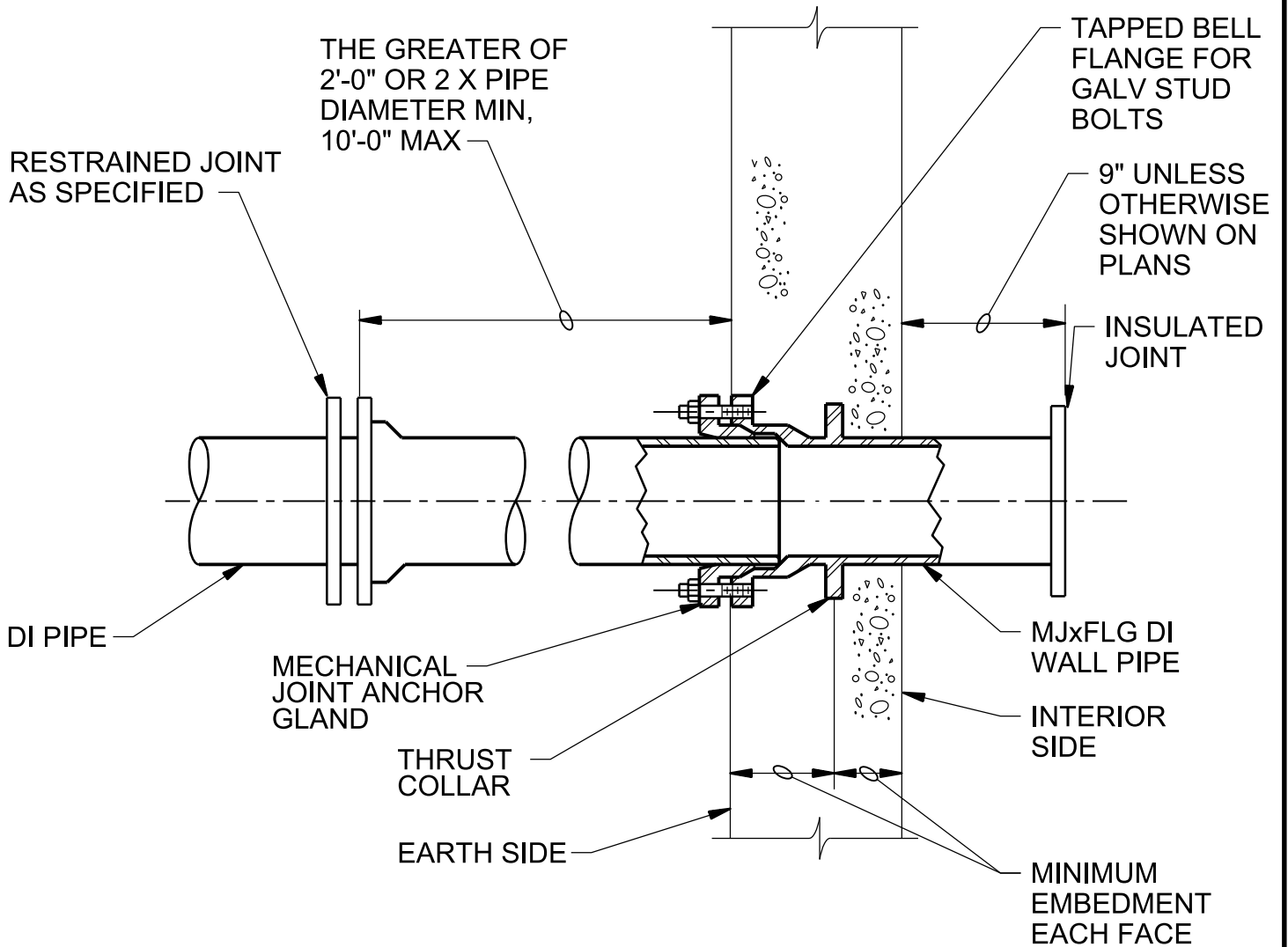
- 1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

DUCTILE IRON WALL PIPE

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4027-600



PIPE DIAMETER (IN)	MIN EMBEDMENT EACH FACE (IN)

NOTES:

1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

MECHANICAL JOINT WALL PIPE FOR DIP

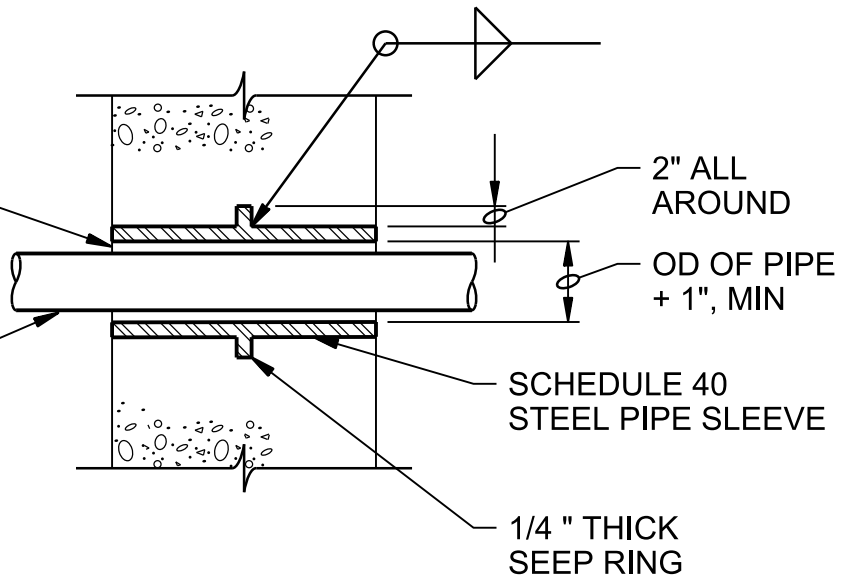
NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4027-601

FILL ANNULAR SPACE
WITH WATERPROOF
DOW CORNING 732 RTV
SILICONE SEALANT,
JOINT SHALL BE
WATERTIGHT

PASSING PIPE



NOTES:

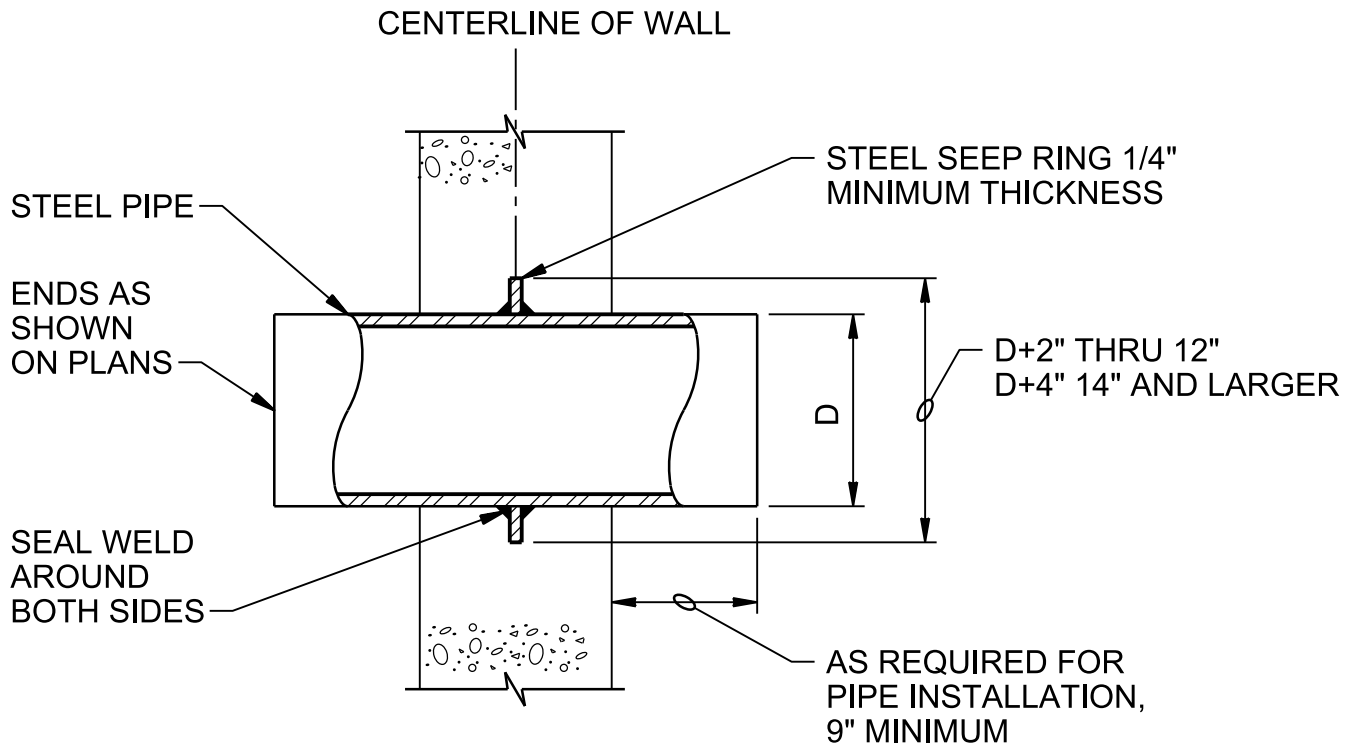
1. DO NOT USE WHERE SUBJECT TO HYDROSTATIC PRESSURE. PAINT ENTIRE SLEEVE AND SEEP RING AS SPECIFIED.

TYPE B PIPE SLEEVE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-604

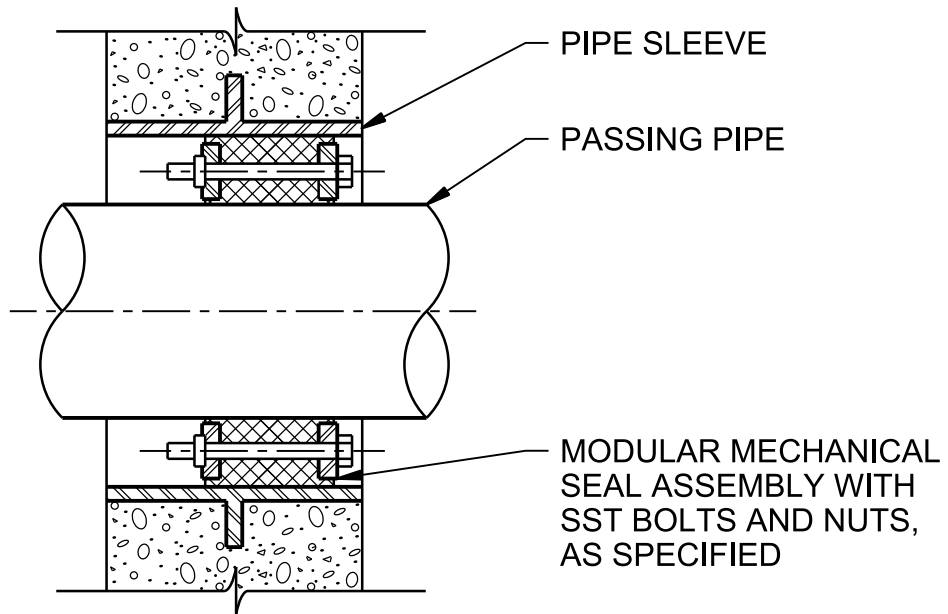


STEEL WALL PIPE

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-605

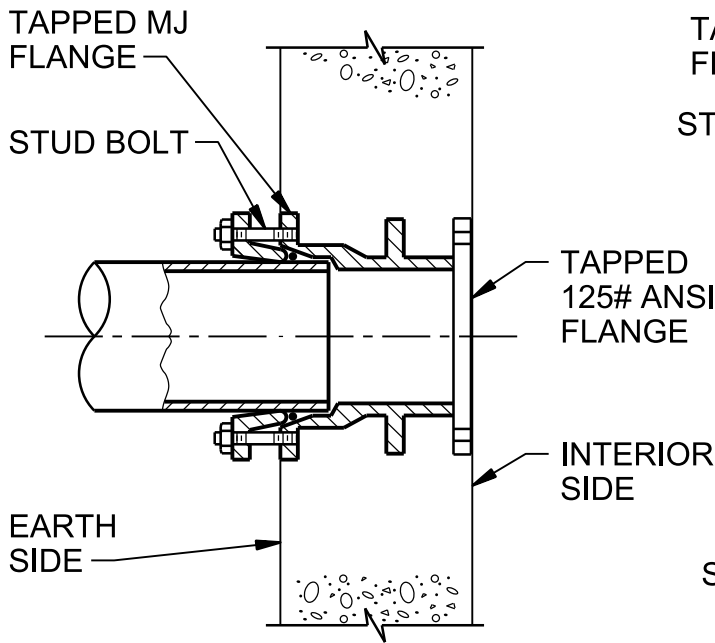


WALL PIPE PENETRATION SEAL

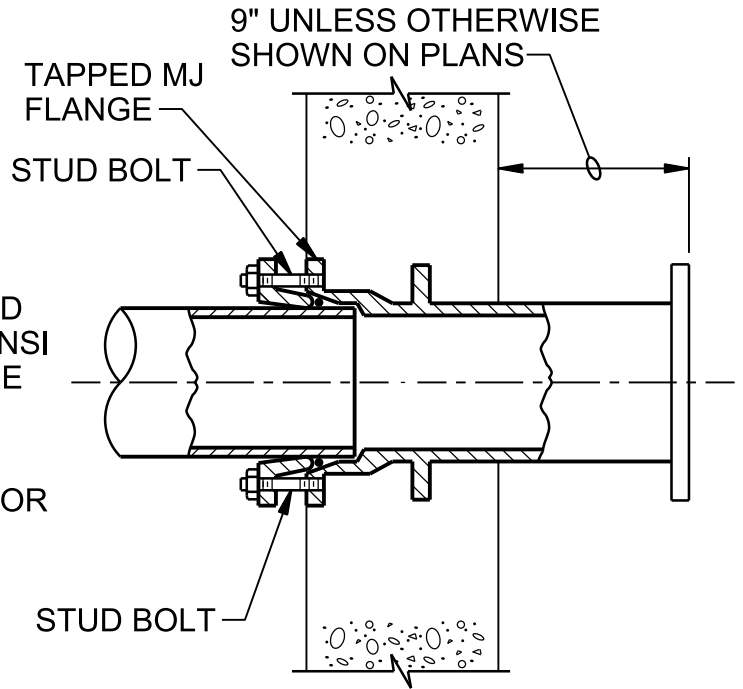
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

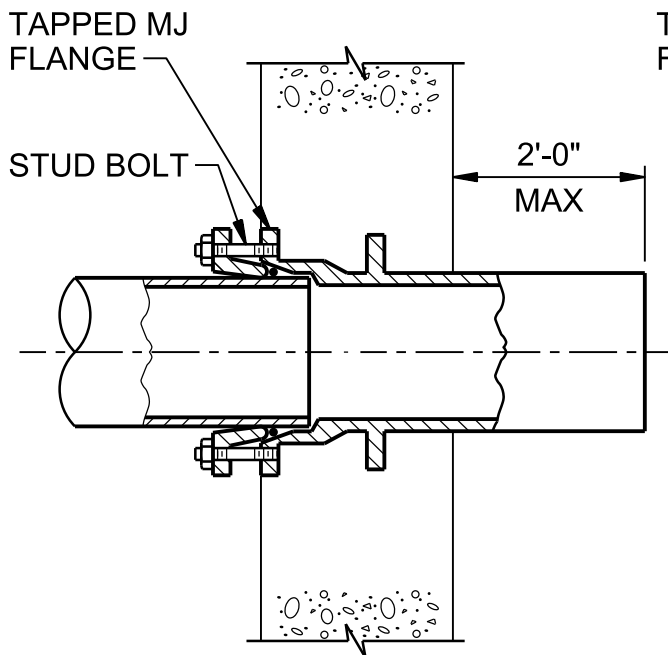
4027-607



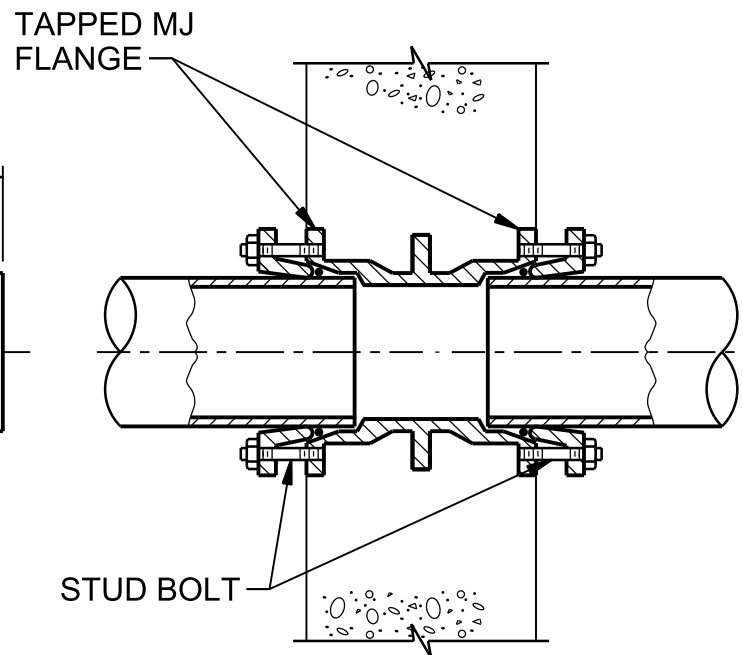
MECHANICAL JOINT X FLUSH FLANGE



MECHANICAL JOINT X FLANGE



MECHANICAL JOINT X PLAIN END



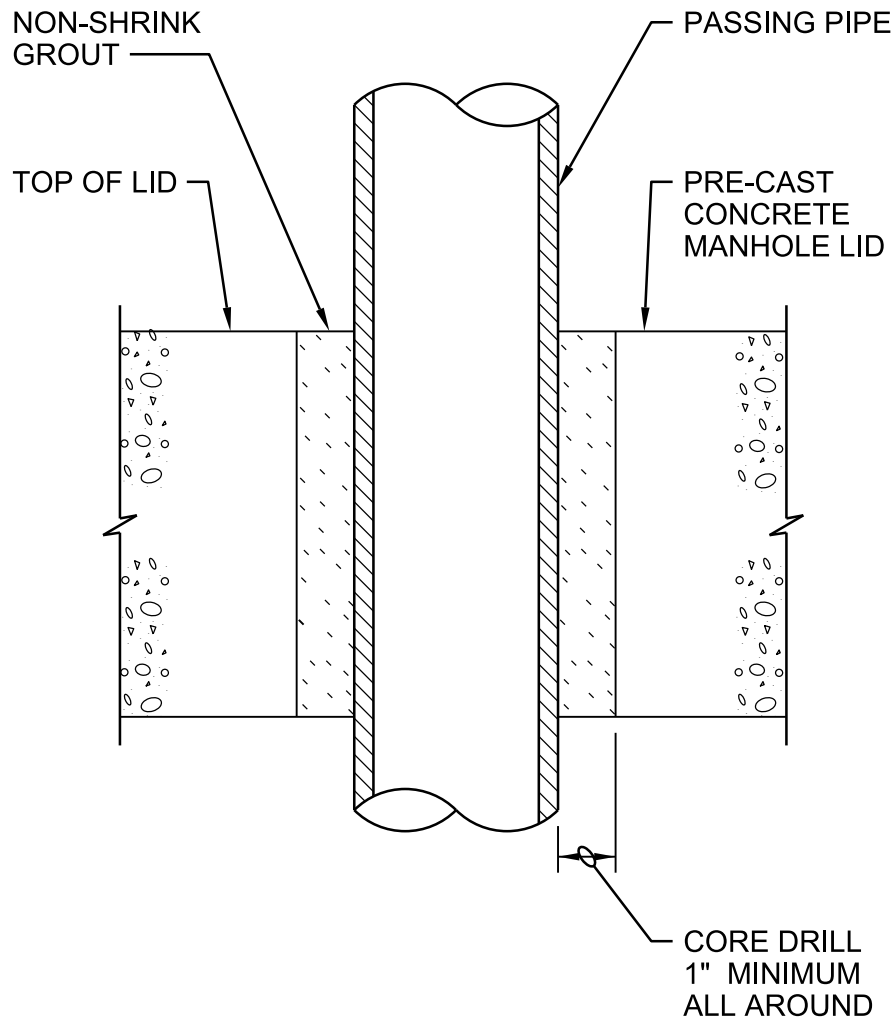
MECHANICAL JOINT X MECHANICAL JOINT

DUCTILE IRON WALL PIPES

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-609

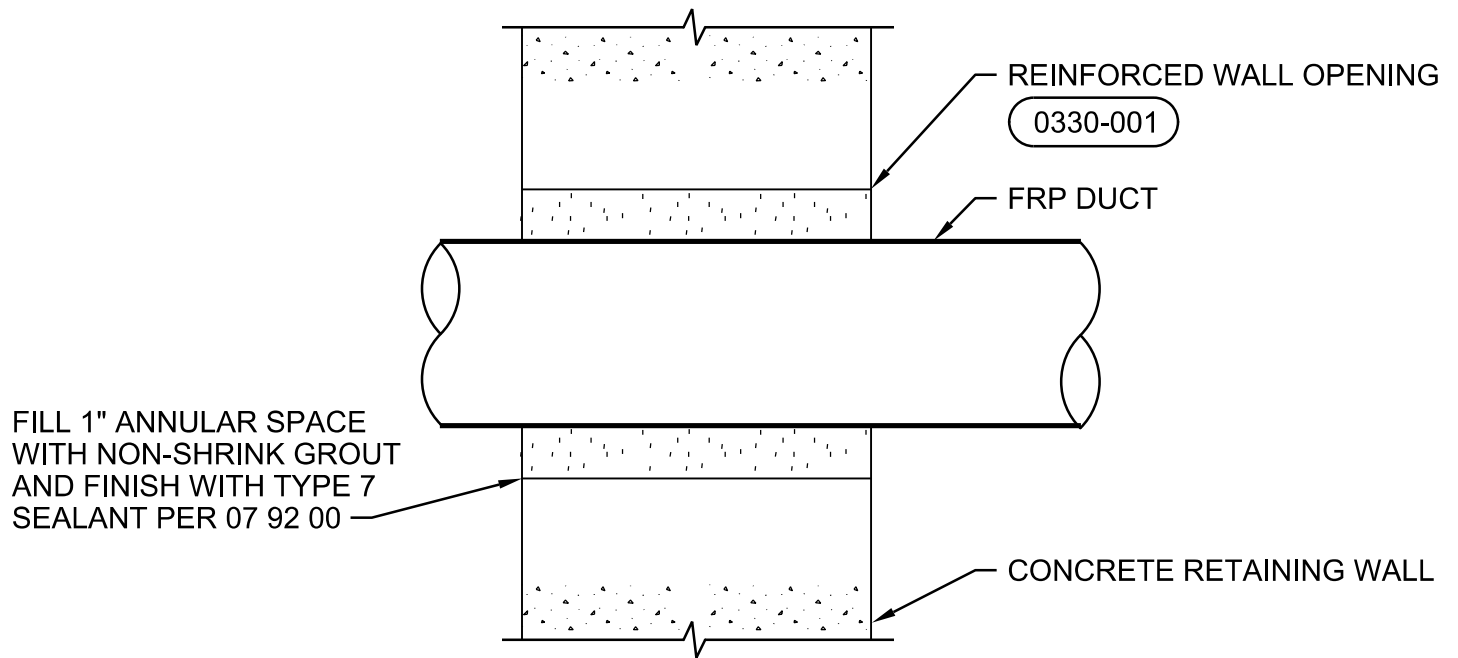


PIPE PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-610



BURIED FRP DUCT PENETRATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-611

SET COVER OF VALVE BOX AND CONC PAD 1/4 " BELOW GRADE IN PAVEMENT OR SHOULDER, AND FLUSH WITH GRADE ELSEWHERE

CAST IRON LID

PROVIDE 1'-6" SQ x 4" THICK CONC PAD

FINISHED GRADE

COMPACTED BACKFILL

CAST IRON VALVE BOX, SLIDING TYPE, UPPER SECTION

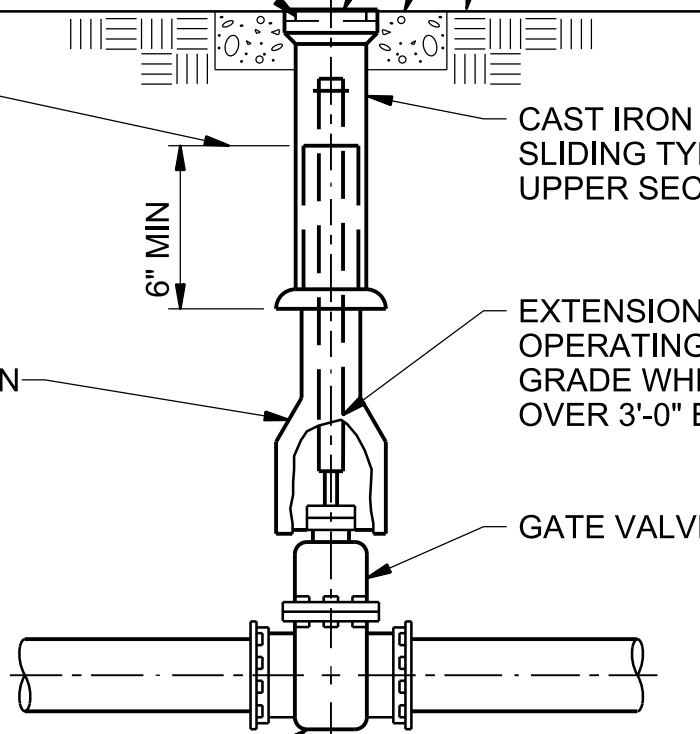
6" MIN

CAST IRON VALVE BOX LOWER SECTION

EXTENSION ROD REQD W/ 2" OPERATING NUT 1'-0" BELOW GRADE WHEN VALVE IS OVER 3'-0" BELOW GRADE

GATE VALVE

VALVE SIZE AND ENDS AS SPECIFIED OR INDICATED ON PLANS

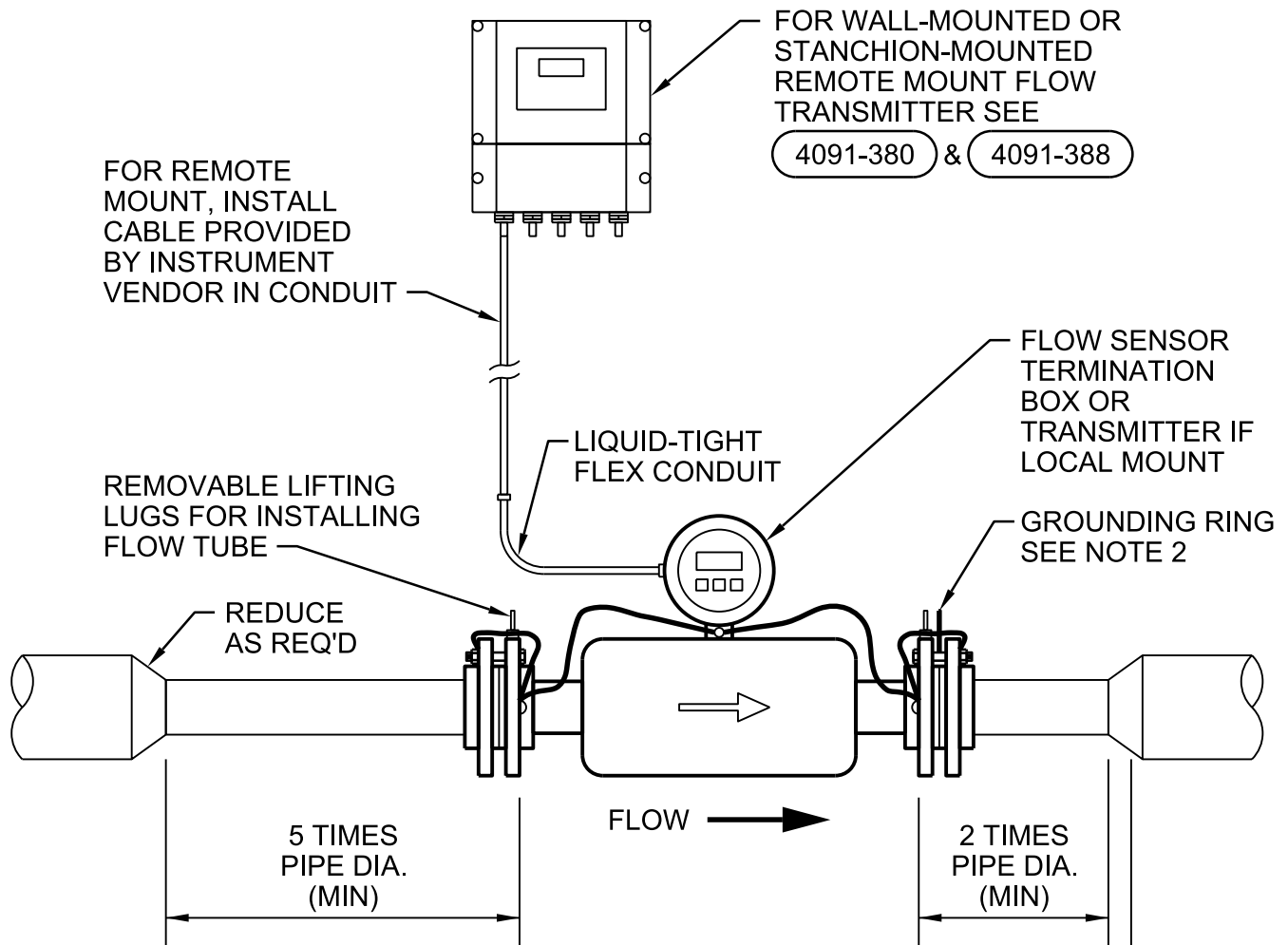


BURIED GATE VALVE BOX

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4027-640



NOTES:

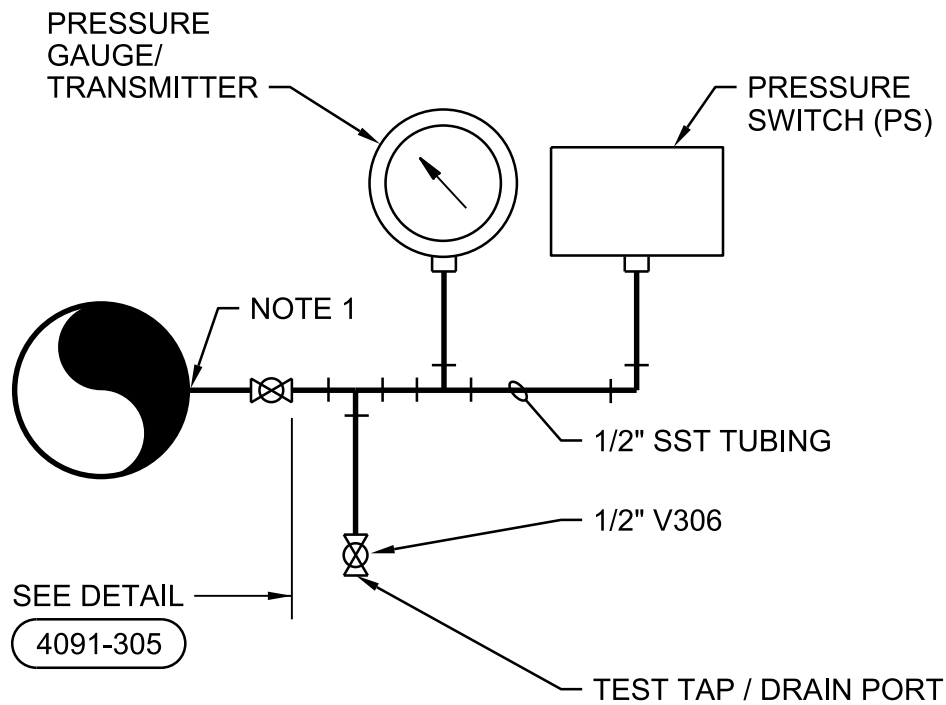
1. INSTALL MEASURING ELECTRODES IN HORIZONTAL PLANE FOR HORIZONTAL INSTALLATIONS. FOR VERTICAL INSTALLATIONS INSTALL FLOW IN UPWARD DIRECTION.
2. TIE GROUND RING TO TRANSMITTER EQUIPMENT GROUND WITH A MINIMUM OF 12 AWG GROUND WIRE.

FLOW ELEMENT AND TRANSMITTER - MAGNETIC

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4091-219



NOTES:

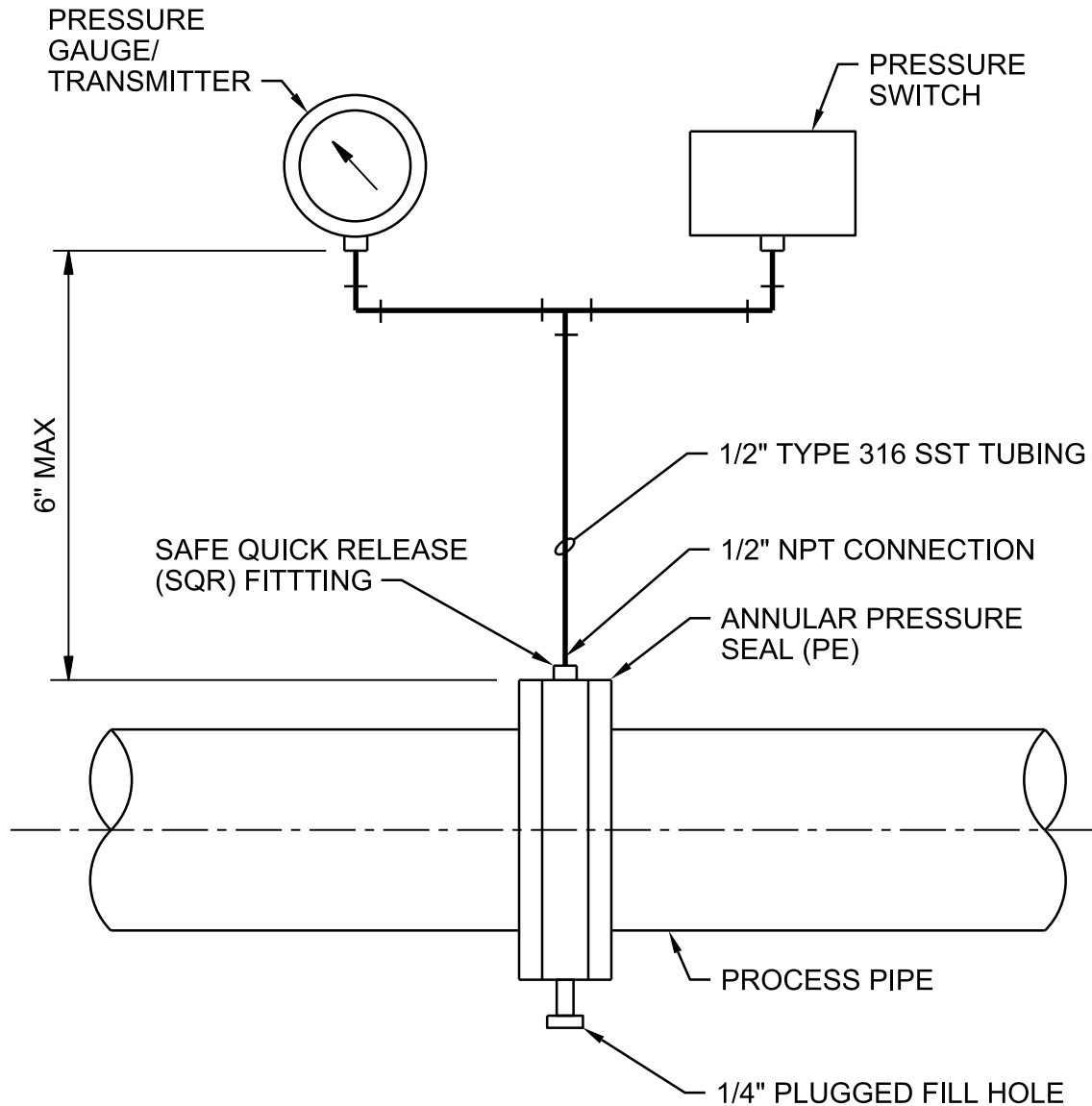
1. LOCATE PROCESS TAP ON SIDE OF PIPE FOR LIQUIDS SERVICE. LOCATE PROCESS TAP ON TOP OF PIPE FOR AIR/GAS SERVICE.
2. INDICATOR AND SWITCH INSTALLATION SHOWN. FOR SINGLE INSTRUMENT INSTALLATIONS, MOUNT DEVICE DIRECTLY ABOVE TEST TAP.
3. INSTALL PRESSURE INSTRUMENTS IN A VERTICAL ORIENTATION FOR VIEWING EASE.
4. DISSIMILAR METAL CONNECTIONS SHALL BE ISOLATED USING INSULATED BUSHING OR PER SECTION 40 27 00.

PRESSURE INSTRUMENT INSTALLATION - DIRECT MOUNTING

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4091-302



NOTES:

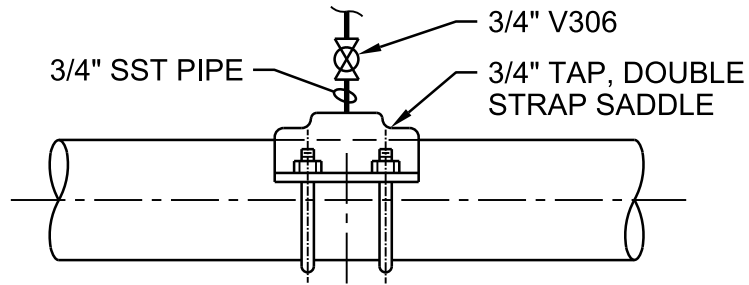
1. INDICATOR AND SWITCH INSTALLATION SHOWN. FOR SINGLE INSTRUMENT INSTALLATIONS, MOUNT DEVICE DIRECTLY TO SEAL.
2. INSTALL PRESSURE INSTRUMENTS IN A VERTICAL ORIENTATION FOR VIEWING EASE.
3. DISSIMILAR METAL CONNECTIONS SHALL BE ISOLATED USING INSULATED BUSHING OR PER SECTION 40 27 00.

PRESSURE INSTRUMENT INSTALLATION - ANNULAR SEAL

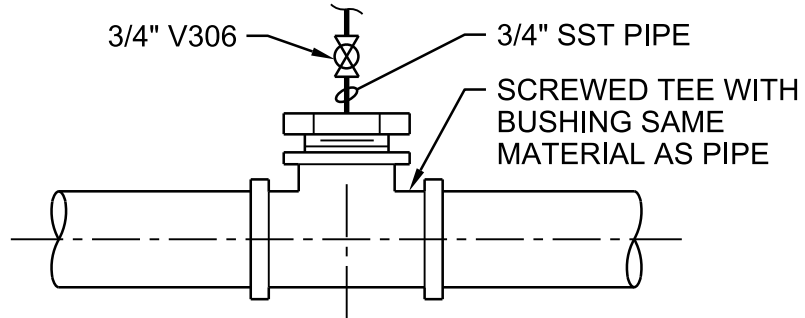
NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

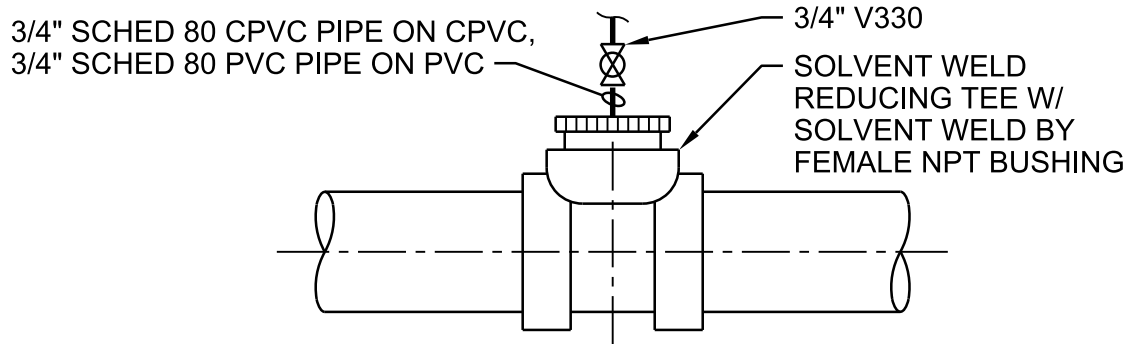
4091-304



CEMENT LINE STEEL PIPE, CAST IRON PIPE AND DUCTILE IRON PIPE



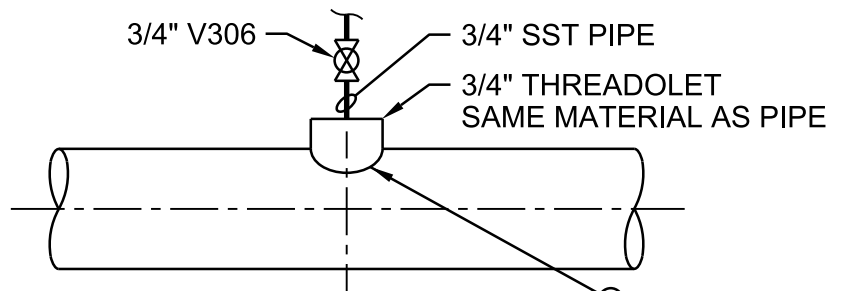
STEEL & SST PIPE 3 1/2" & SMALLER



PVC PIPE

NOTES:

1. DISSIMILAR METAL CONNECTIONS SHALL BE ISOLATED USING INSULATED BUSHING OR PER SECTION 40 27 00.



STEEL & SST PIPE 4" & LARGER

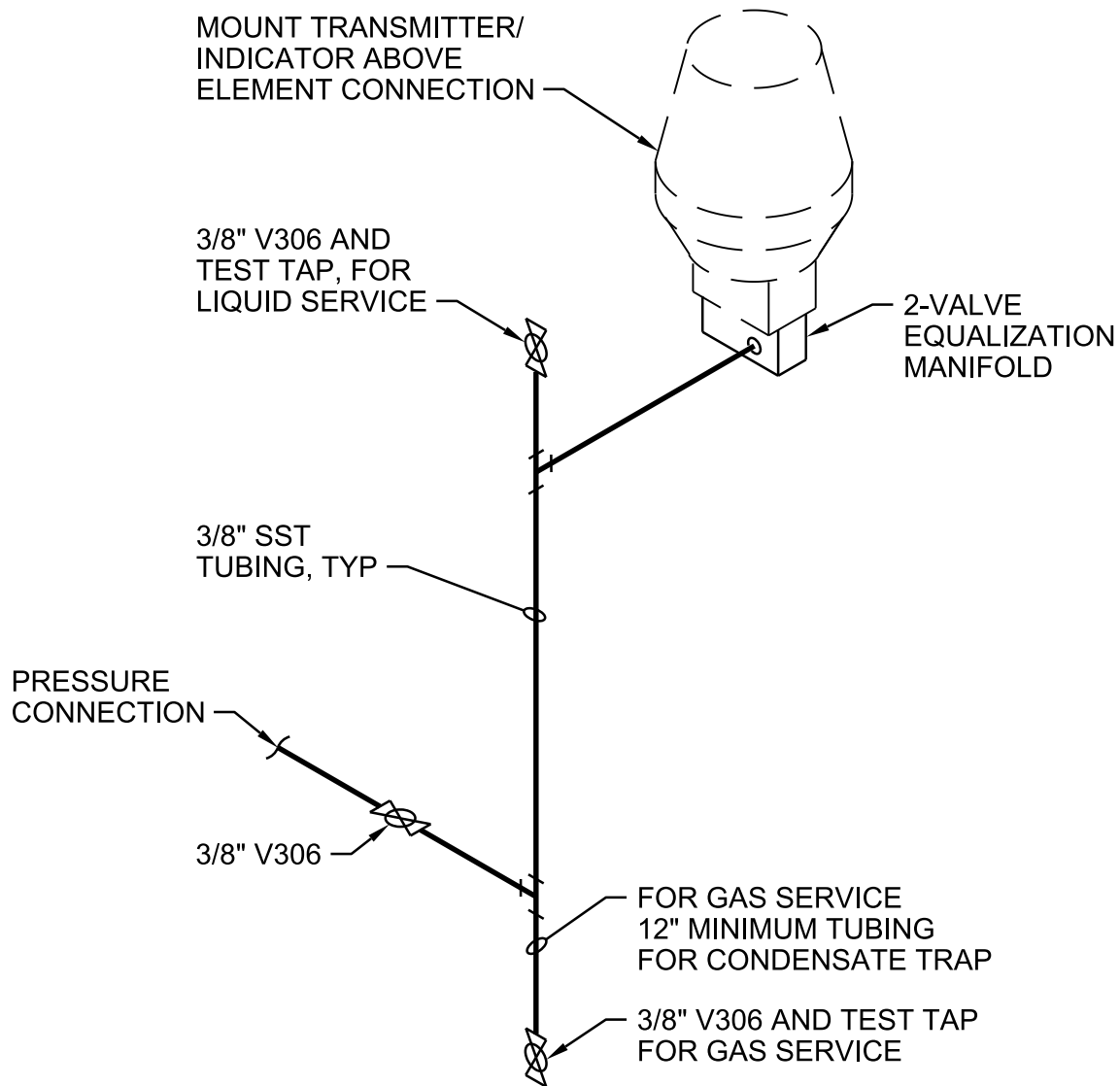
3/16

PRESSURE CONNECTION INSTALLATION

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4091-305

**NOTES:**

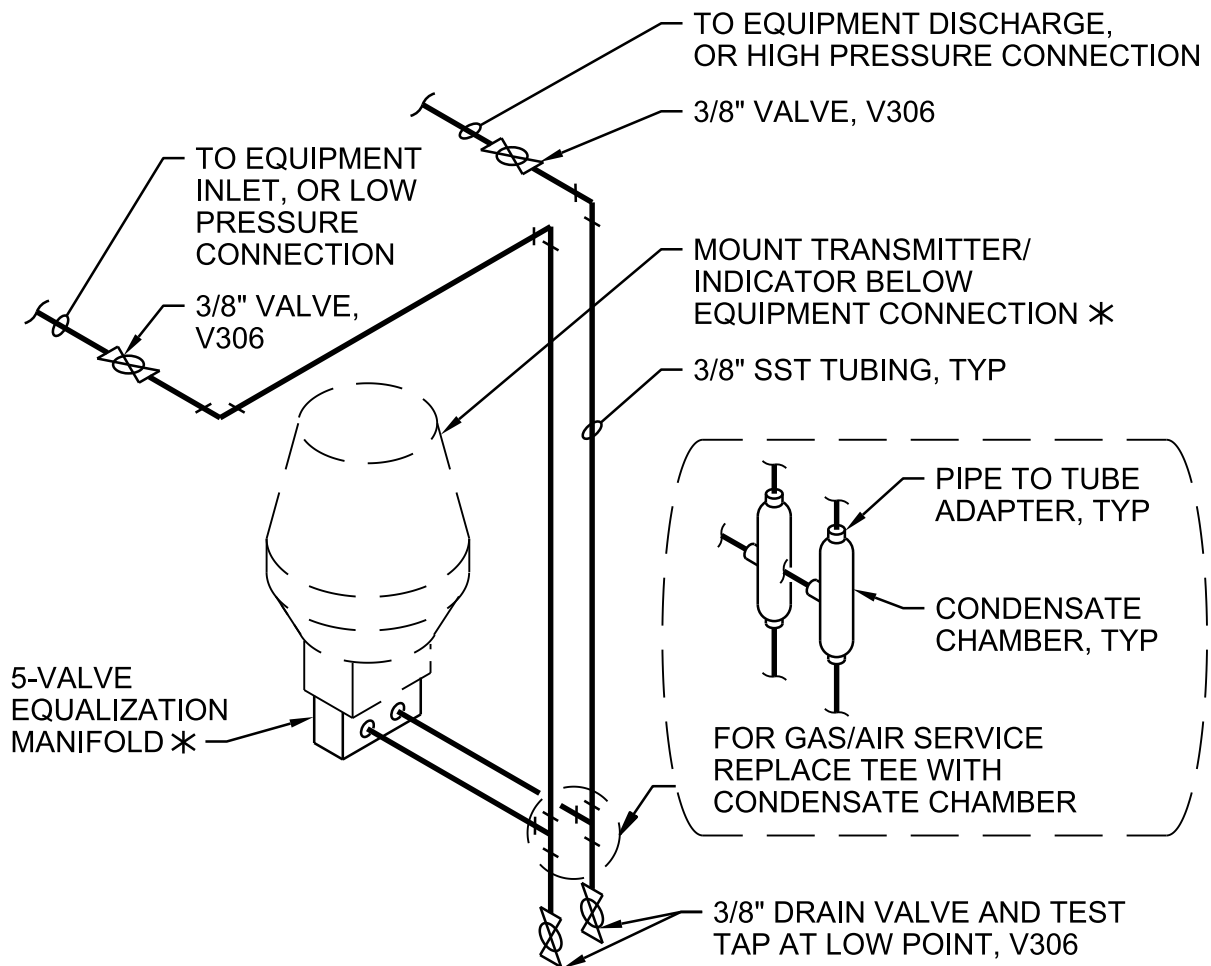
1. FOR GAS SERVICE, SLOPE ALL LINES UPWARD TOWARD INSTRUMENT.
2. FOR LIQUID SERVICE, SLOPE ALL LINES UPWARD TOWARD VENT VALVE.
3. ALL LINES SHALL HAVE A CONTINUOUS SLOPE OF 1/4" PER FOOT MIN (1" PER FOOT PREFERRED).

PRESSURE TRANSMITTER INSTALLATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4091-306



NOTES:

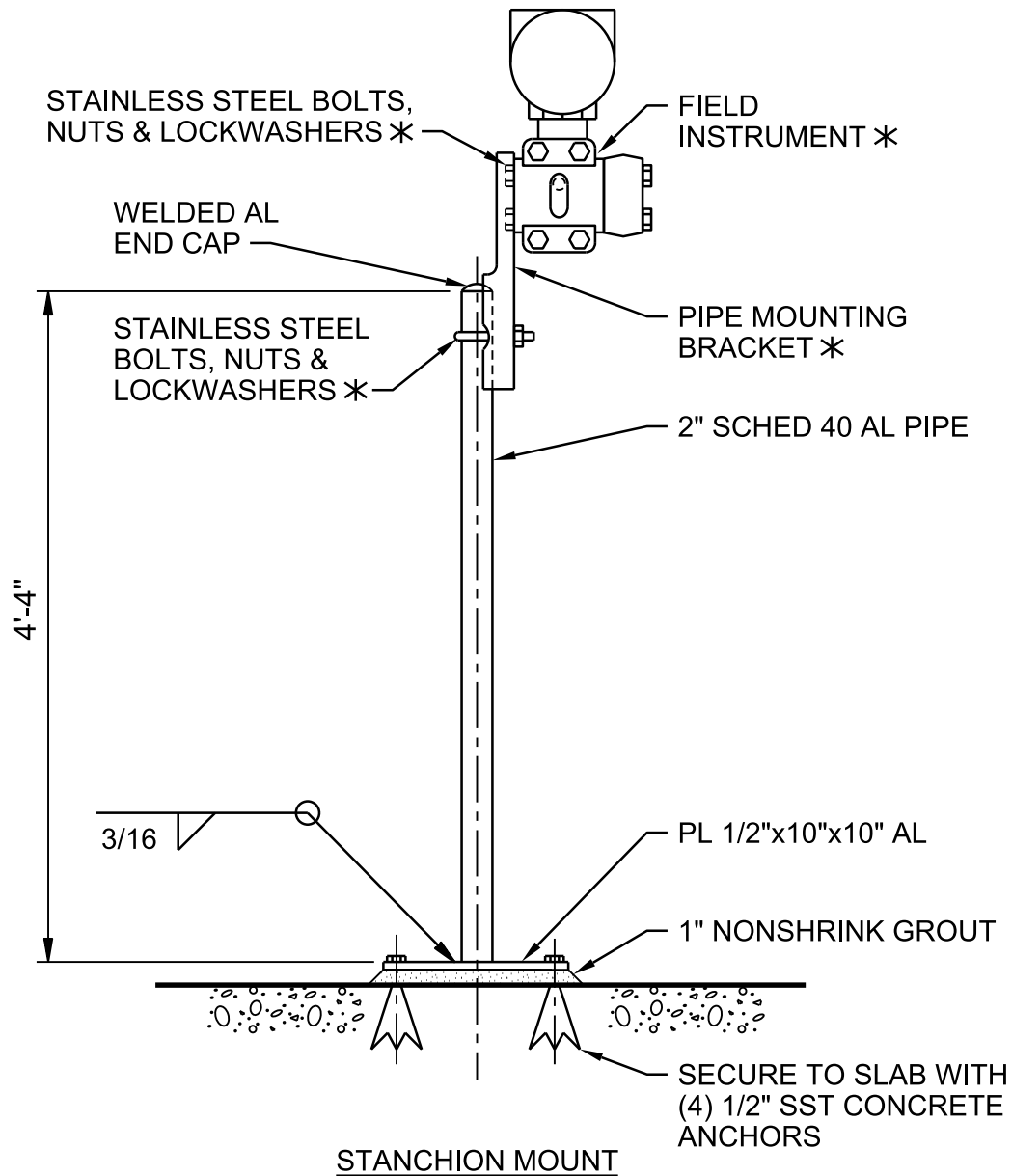
1. FOR LIQUID SERVICE, SLOPE ALL LINES DOWNWARD TOWARD INSTRUMENT.
2. FOR GAS/AIR SERVICE, SLOPE ALL LINES DOWNWARD TOWARD CONDENSATE CHAMBER.
3. ALL LINES SHALL HAVE A CONTINUOUS SLOPE OF 1/4" PER FOOT MIN (1" PER FOOT PREFERRED).
4. COMPONENTS DESIGNATED BY * ARE SUPPLIED BY THE INSTRUMENT MANUFACTURER.
5. FOR REMOTE PRESSURE TRANSMITTER INSTALLATION SEE DETAIL (4091-380).

PRESSURE DIFFERENTIAL TRANSMITTER/INDICATOR INSTALLATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4091-307

**NOTES:**

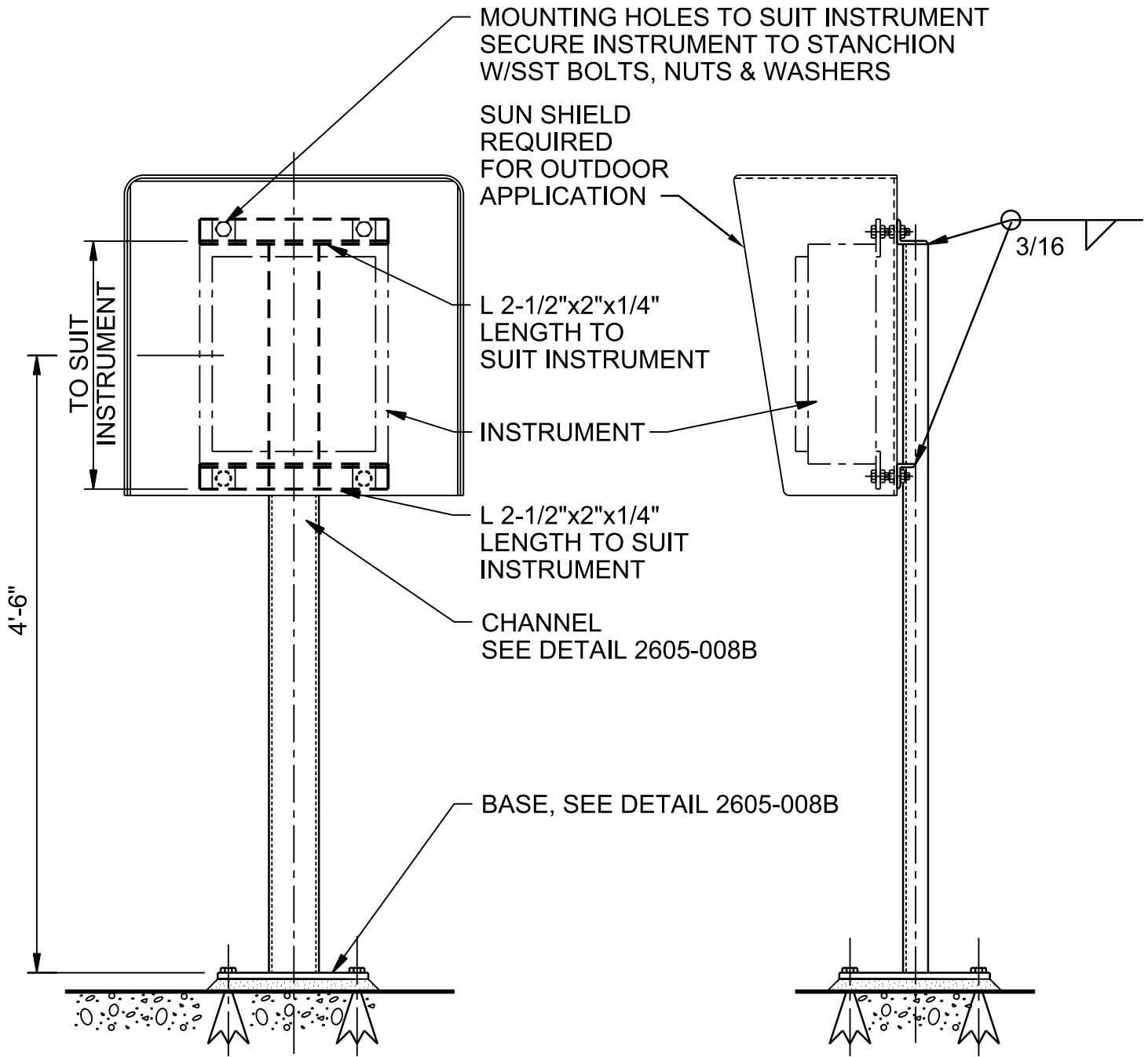
1. PAINT ALUMINUM IN CONTACT WITH CONCRETE ACCORDING TO SPECIFICATIONS FOR PAINTING.
2. COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.

FIELD INSTRUMENT MOUNTING - STANCHION

NTS

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

4091-380



NOTES:

1. ROUND OFF ALL EXPOSED EDGES AND CORNERS.
2. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.
3. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

CASE MOUNTED INSTRUMENTS - STANCHION

NTS

DETAIL 1 OF 2

4091-382

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON

BACK FORMED OF SINGLE SHEET 10 GA ALUMINUM, TACK WELD TO TOP & SIDES AS REQUIRED

TOP & SIDES FORMED OF SINGLE SHEET 10 GA ALUMINUM

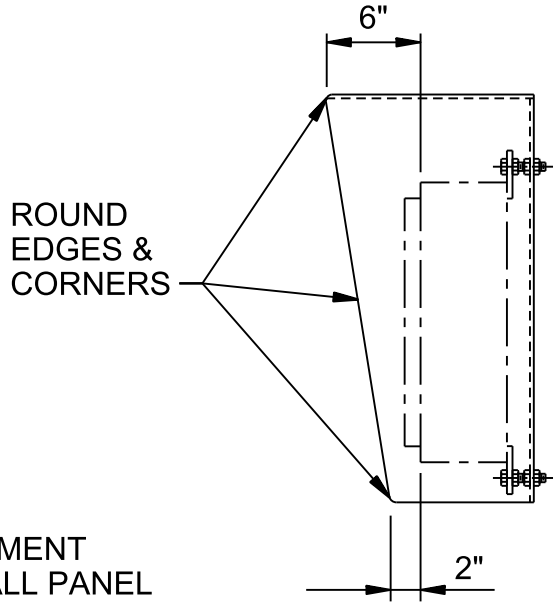
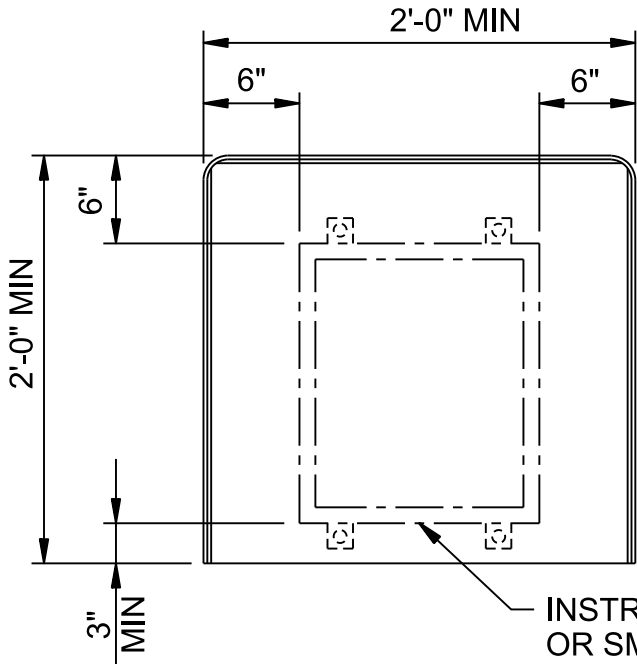
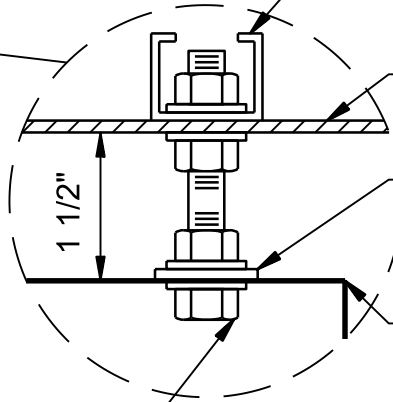
3/8" SST STUD BOLT WITH SST NUTS AND WASHERS, TYP OF 4

INSTRUMENT/HOOD SUPPORT ANGLE OR UNISTRUT (SHOWN) AS APPLICABLE

RAINHOOD

INSTRUMENT MOUNTING FOOT

INSTRUMENT ENCLOSURE



NOTES:

1. ROUND OFF ALL EXPOSED EDGES AND CORNERS.
2. PAINT ALUMINUM IN CONTACT WITH CONCRETE ACCORDING TO SPECIFICATIONS FOR PAINTING.

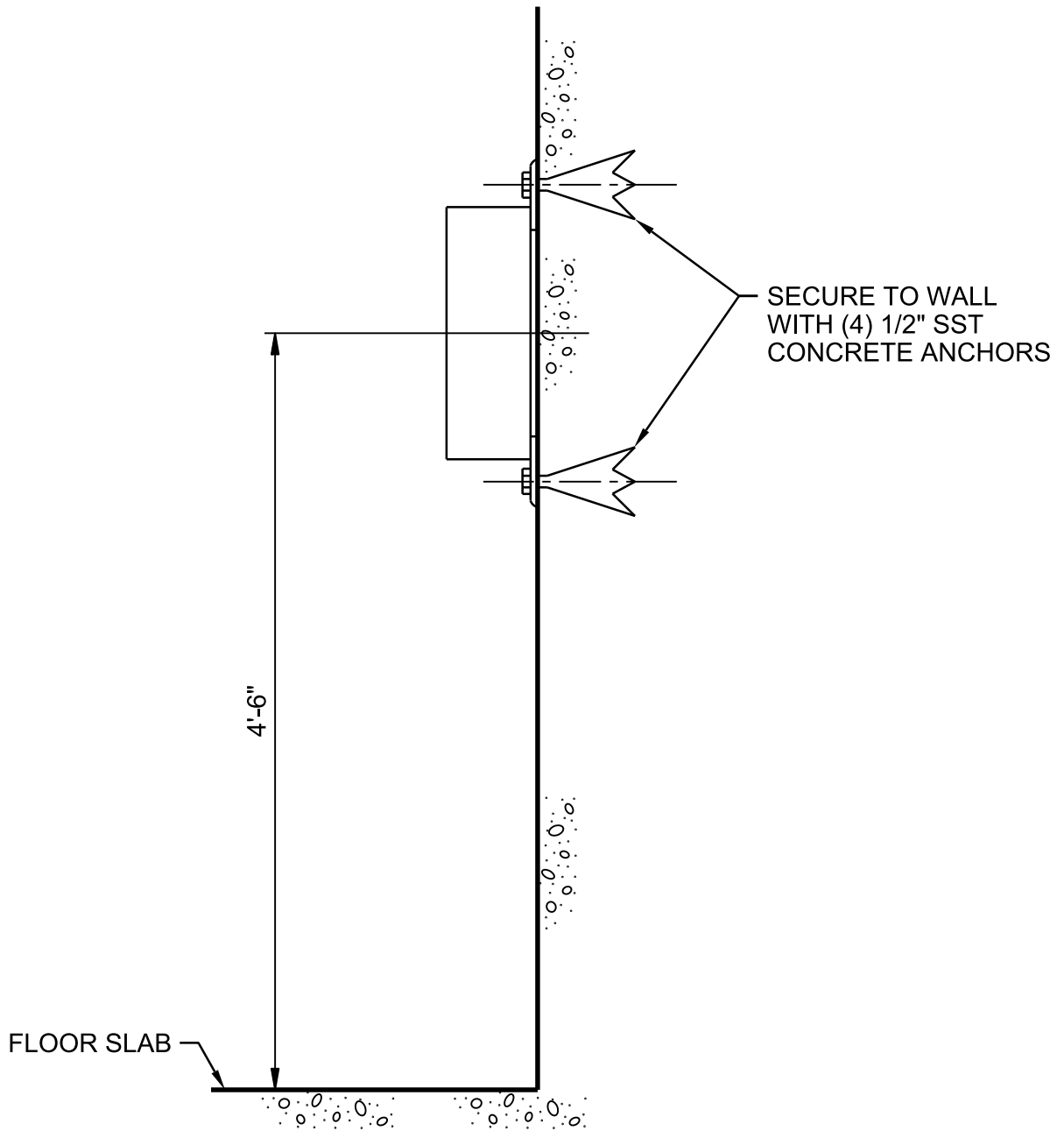
CASE MOUNTED INSTRUMENTS - STANCHION

NTS

DETAIL 2 OF 2

4091-382

PHASE 5B PROJECT: PACKAGE 1
 SCTP ODOR CONTROL AND EXISTING
 FACILITIES IMPROVEMENTS
 CLARK COUNTY, WASHINGTON



WALL MOUNTED PANEL OR INSTRUMENT INSTALLATION

NTS

PHASE 5B PROJECT: PACKAGE 1
SCTP ODOR CONTROL AND EXISTING
FACILITIES IMPROVEMENTS
CLARK COUNTY, WASHINGTON

4091-388