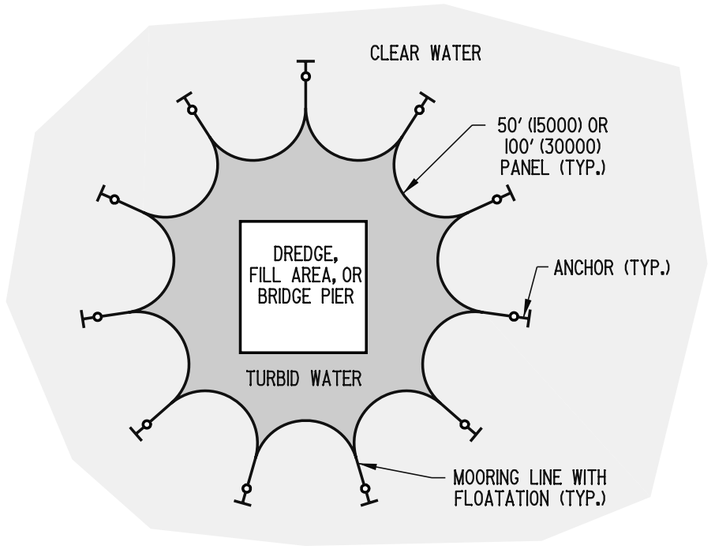
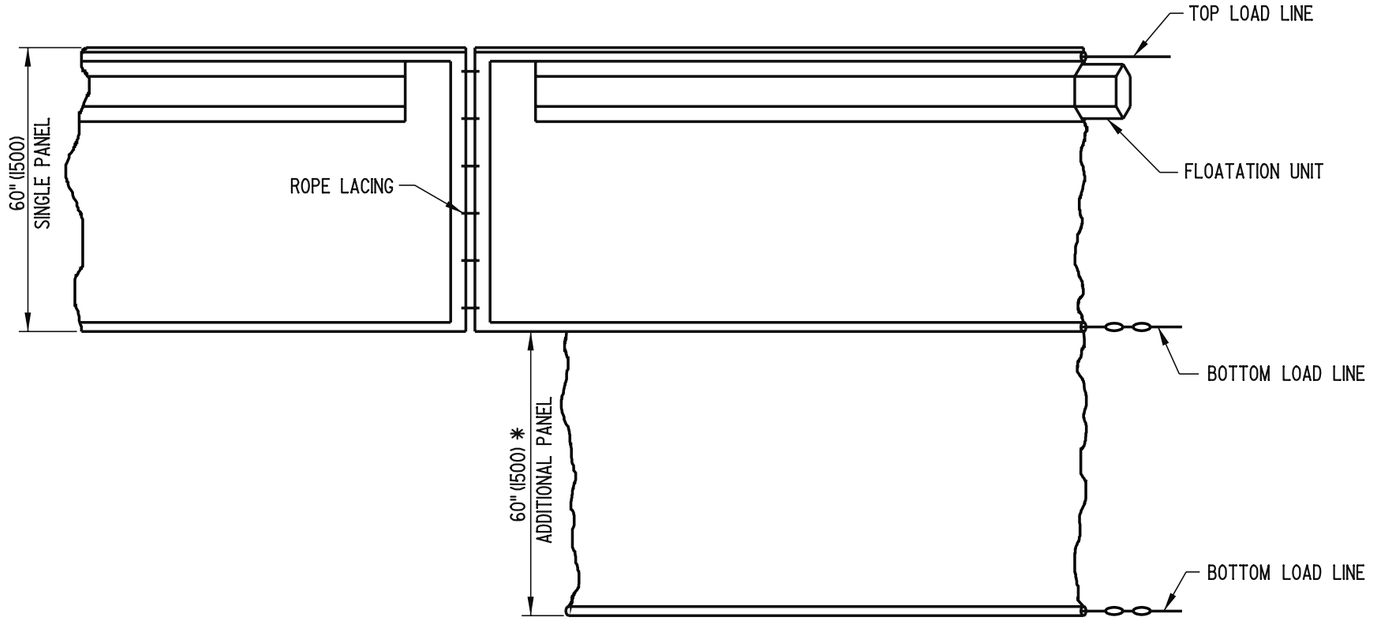
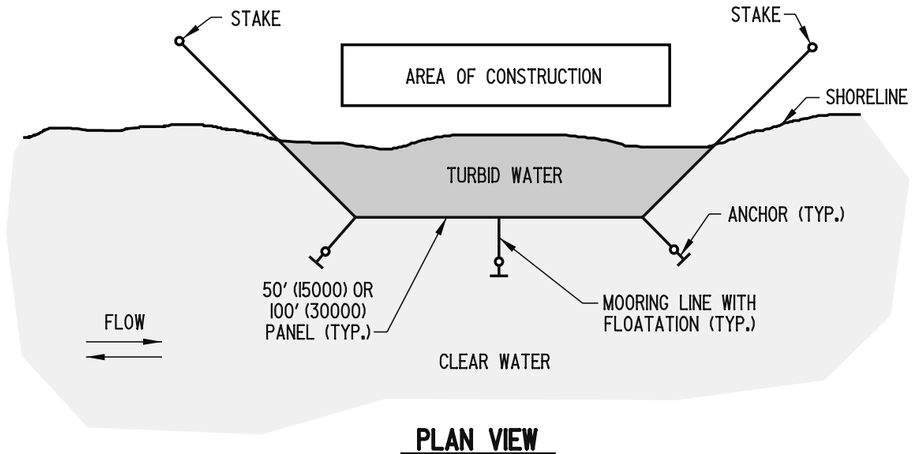
SCALE : N.T.S.



PLAN VIEW
OPEN WATER APPLICATION



ELEVATION



PLAN VIEW
SHORELINE APPLICATION

FLOATING TURBIDITY CURTAIN

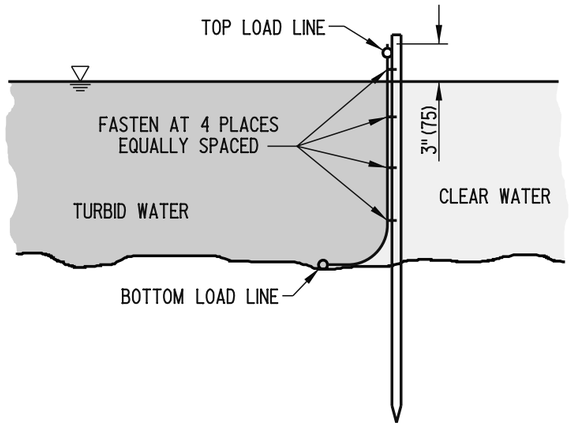
NOTE: 1.) ADDITIONAL PANEL REQUIRED FOR DEPTHS GREATER THAN 5' (1500).

2.) FLOATING TURBIDITY CURTAIN SHALL REACH BOTTOM UP TO DEPTHS OF 10' (3000) BY USING TWO PANELS. DEPTHS GREATER THAN 10' (3000) SHALL REQUIRE SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

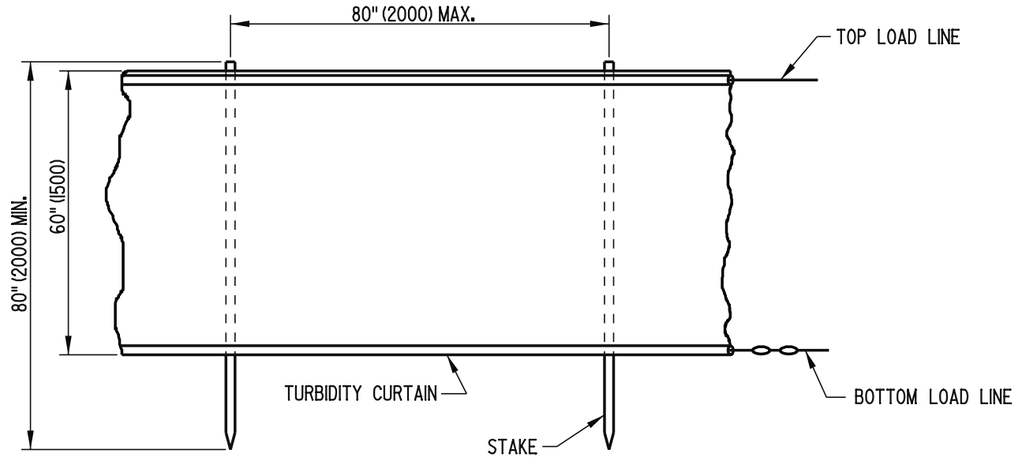
DELAWARE DEPARTMENT OF TRANSPORTATION	TURBIDITY CURTAIN		APPROVED Caroline Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. E-23 (2005)	SHT. 1 OF 2	RECOMMENDED DESIGN ENGINEER 11/29/05 DATE

09/08/2005

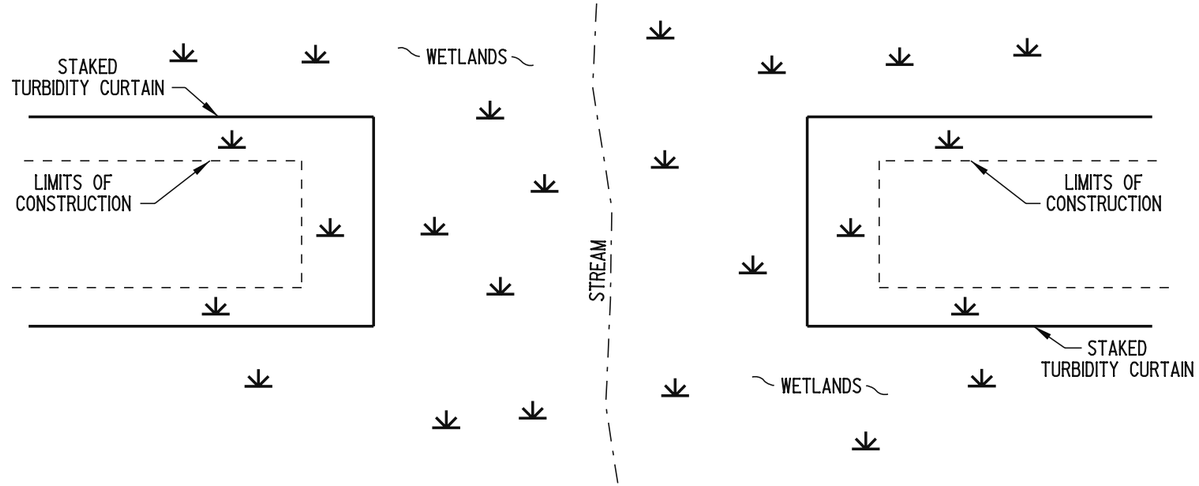
SCALE : N.T.S.



SECTION



ELEVATION



PLAN VIEW

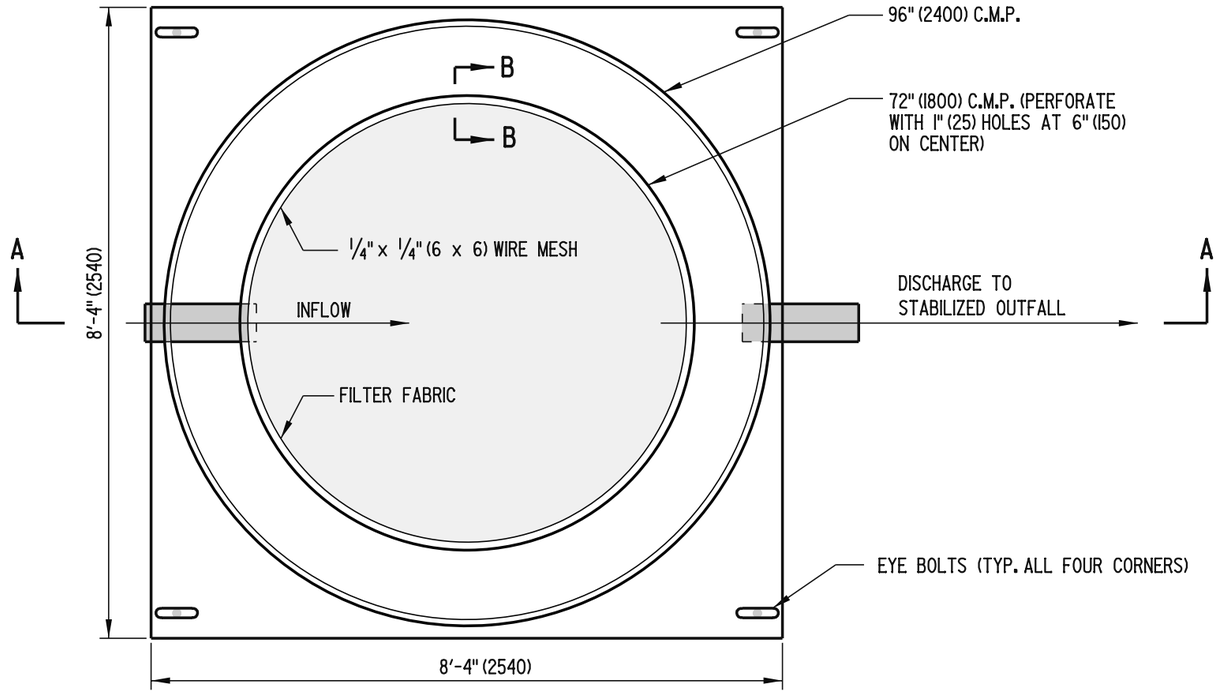
SHALLOW WATER/MARSH APPLICATION

STAKED TURBIDITY CURTAIN

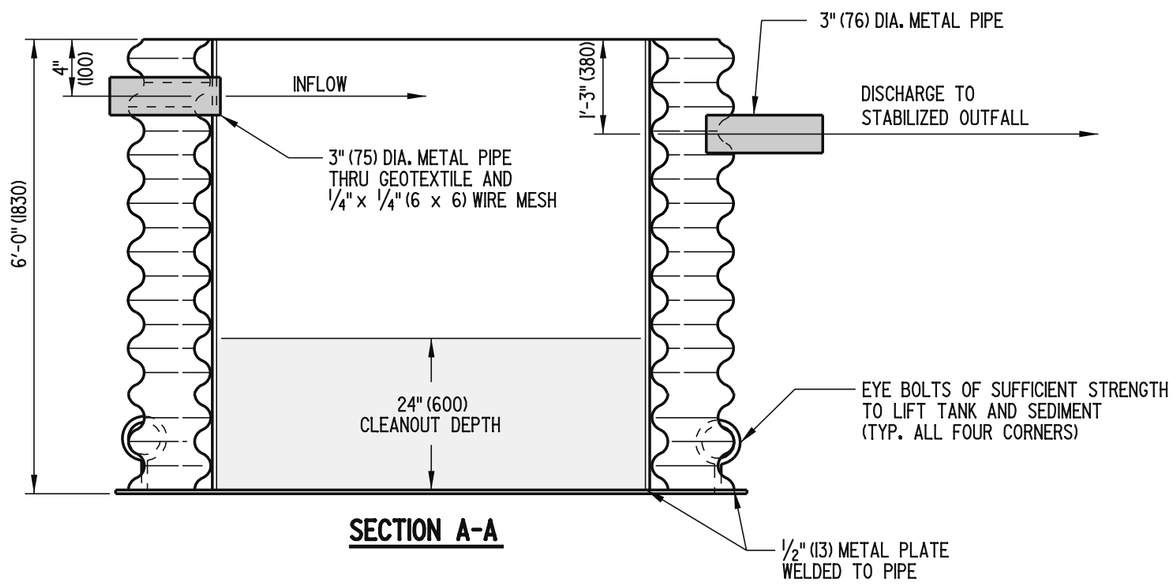
DELAWARE DEPARTMENT OF TRANSPORTATION	TURBIDITY CURTAIN		APPROVED Carolann Wicks CHIEF ENGINEER — 12/5/05 DATE
	STANDARD NO. E-23 (2005)	SHT. 2 OF 2	RECOMMENDED Duane M. O'Donnell DESIGN ENGINEER — 11/29/05 DATE

09/08/2005

SCALE : N.T.S.



PLAN



SECTION A-A

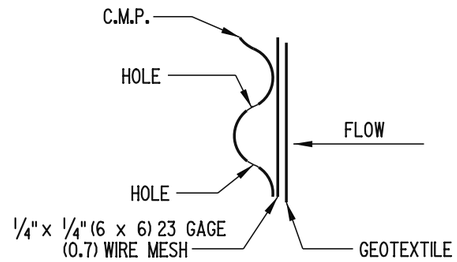
NOTES:

1). THE PORTABLE SEDIMENT TANK SHOWN MAY BE USED IN SITES WHERE SPACE IS LIMITED TO CONSTRUCT A DEWATERING BASIN.

2). THE MAXIMUM PUMP DISCHARGE INTO THIS TYPICAL PORTABLE SEDIMENT TANK SHALL BE 425 GALLONS PER MINUTE (26 LITERS PER SECOND). THE FILTER FABRIC SHALL BE REPLACED WHEN THE PORTABLE SEDIMENT TANK CAN NO LONGER ALLOW THIS FLOW RATE, WHEN THERE IS A TEAR, OR WHEN DIRECTED BY THE ENGINEER.

3). SEVERAL UN-CONNECTED OR CONNECTED IN PARALLEL PORTABLE SEDIMENT TANKS MAY BE USED WHEN A HIGHER FLOW RATE IS NEEDED TO DE-WATER THE JOB.

4). OTHER DESIGNS MAY BE USED PROVIDED THE HYDRAULIC DESIGN IS SUBMITTED TO AND APPROVED BY THE STORMWATER ENGINEER.

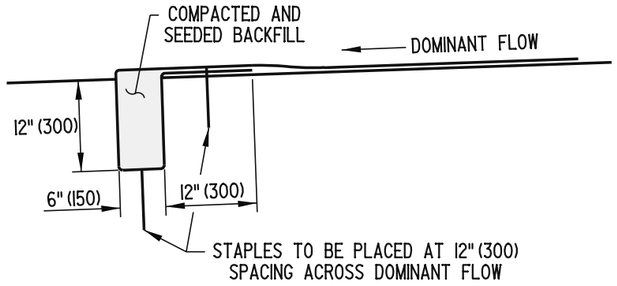


SECTION B-B

DELAWARE DEPARTMENT OF TRANSPORTATION	PORTABLE SEDIMENT TANK			APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. E-24 (2005)	SHT. 1 OF 1		RECOMMENDED James M. Ojeda DESIGN ENGINEER 11/29/05 DATE

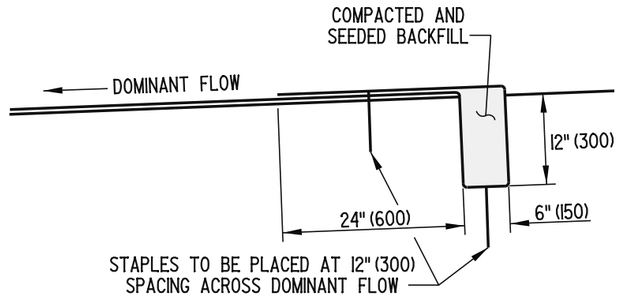
09/08/2005

SCALE : N.T.S.



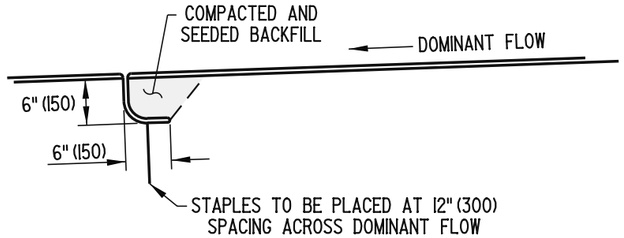
INITIAL TRENCH ANCHOR DETAIL

APPLIED AT THE DOWNSTREAM END OF DITCH



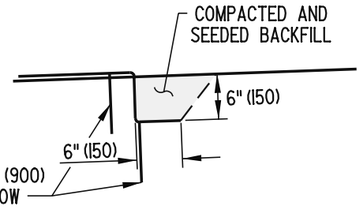
TERMINAL TRENCH ANCHOR DETAIL

APPLIED AT THE UPSTREAM END OF DITCH

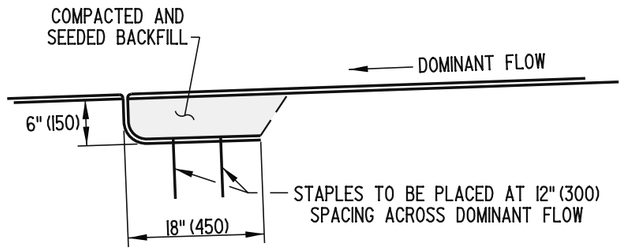


CHECK SLOT DETAIL

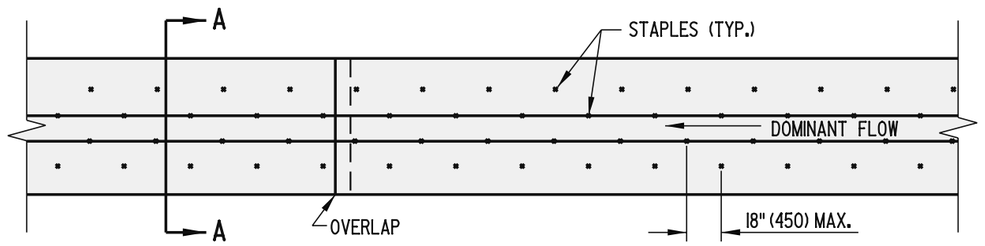
(AS NEEDED PER PLANS)



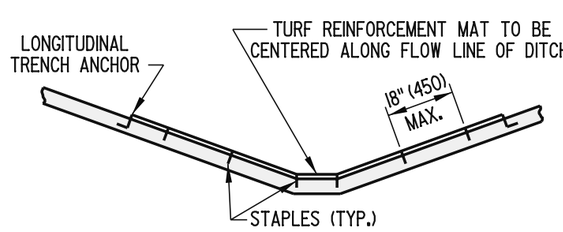
LONGITUDINAL TRENCH ANCHOR DETAIL



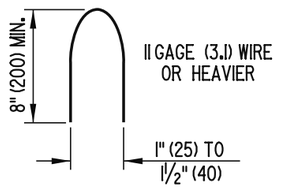
OVERLAP DETAIL



STABILIZATION OF DITCHES PLAN



STABILIZATION OF DITCHES SECTION A-A



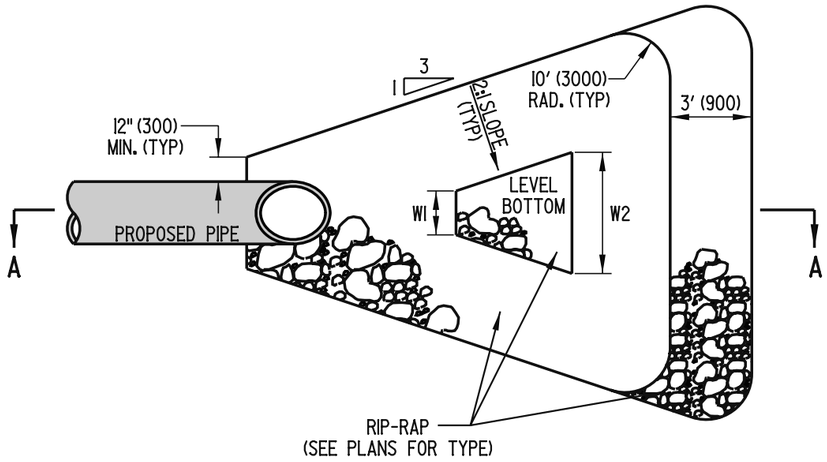
STAPLE DETAIL

NOTES: 1. ADDITIONAL STAPLES NOT SHOWN ARE REQUIRED AT OVERLAPS, ENDS, CHECK SLOTS AND EDGES. SEE APPROPRIATE DETAILS FOR STAPLE PLACEMENT.
2. STAPLES ARE TO BE STAGGERED.
3. TOPSOIL UNDER TURF REINFORCEMENT MAT IS TO BE TRACKED AND SEEDED.

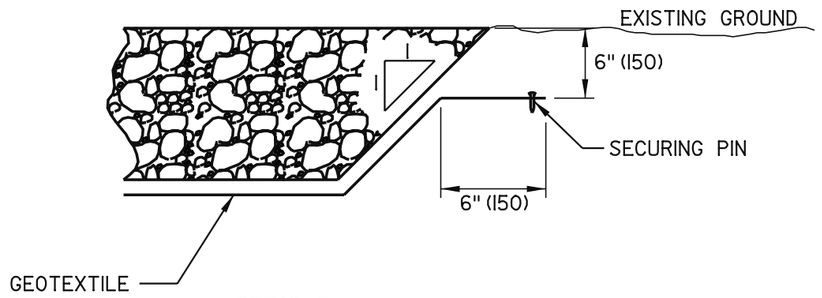
DELAWARE DEPARTMENT OF TRANSPORTATION	TURF REINFORCEMENT MAT APPLICATIONS	APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. E-25 (2005) SHT. 1 OF 1	RECOMMENDED DESIGN ENGINEER 11/29/05 DATE

09/08/2005

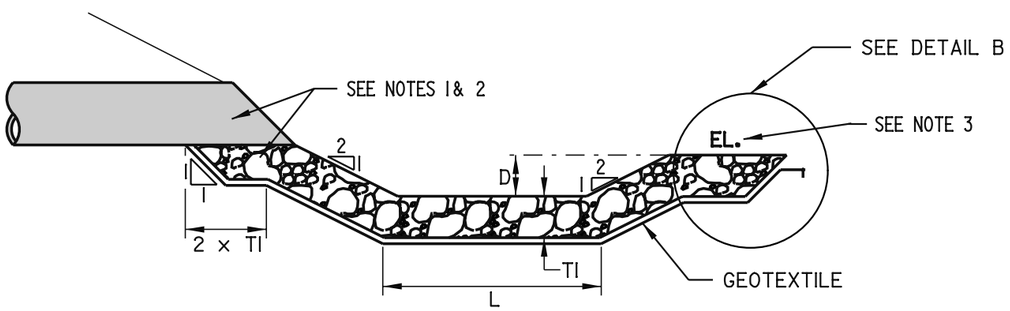
SCALE : N.T.S.



PLAN VIEW



DETAIL B



SECTION A-A

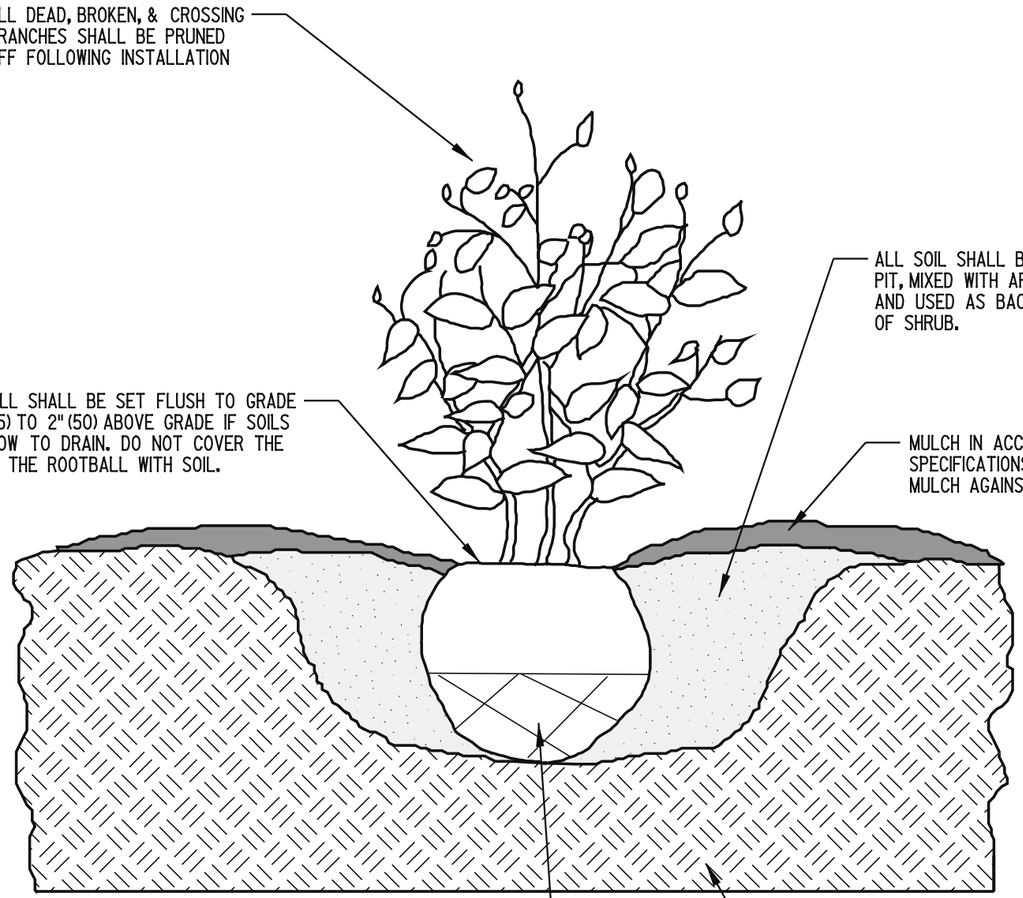
NOTES:

1. RIPRAP IS TO BE PLACED PRIOR TO PLACING PIPE.
2. PLACE DELAWARE NO. 3 STONE UNDER PIPE.
3. ELEVATION (EL.) SHOULD NOT BE HIGHER THAN PIPE INVERT.
4. REFER TO THE PIPE ENERGY DISSIPATOR SCHEDULE ON THE CONSTRUCTION PLANS FOR THE VALUE OF DIMENSION VARIABLES.

DELAWARE DEPARTMENT OF TRANSPORTATION	RIPRAP ENERGY DISSIPATOR DETAIL		APPROVED CHIEF ENGINEER	10/10/06 DATE
	STANDARD NO. E-26 (2006)	SHT. 1 OF 1	RECOMMENDED DESIGN ENGINEER	10/9/06 DATE

08/04/2006

SCALE : N.T.S.



NOTES:

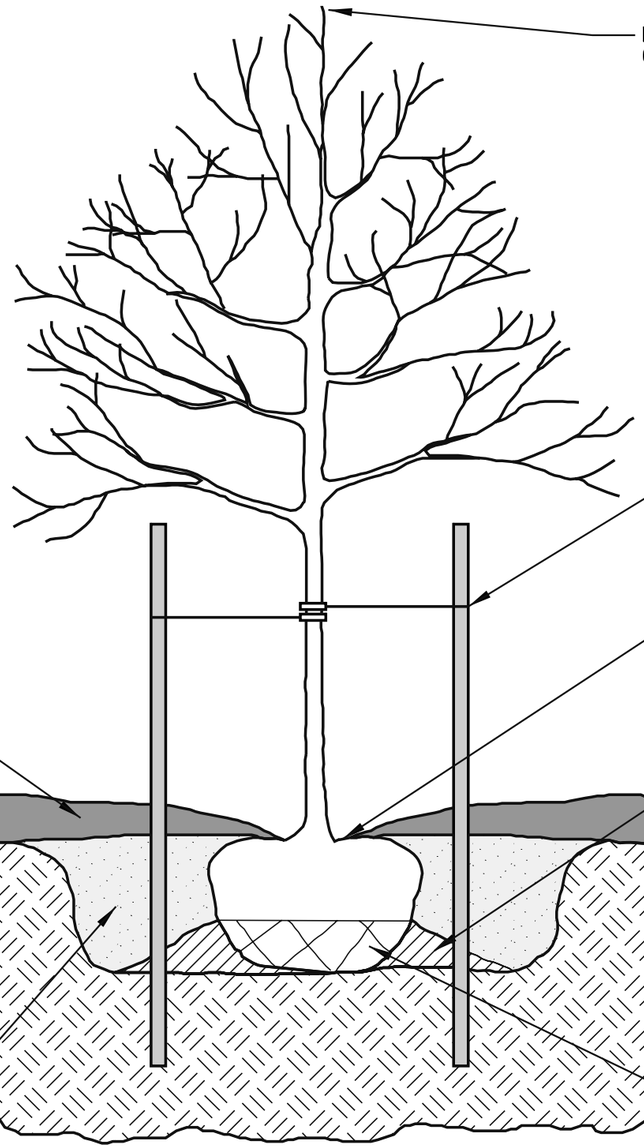
1). BASE OF PLANTING PIT SHALL BE A MINIMUM WIDTH OF TWICE THE ROOT BALL SIZE AND A MAXIMUM OF THREE TIMES THE ROOT BALL SIZE.
2). SHRUBS SHALL BE INSTALLED IN MASSES OF NO LESS THAN 3 PLANTS. A MINIMUM OF 6' (1800) WIDTH IS REQUIRED FROM THE BACK OF CURB TO THE EDGE OF SIDEWALK FOR INSTALLATION OF SHRUBS.
3). ALL PRUNING SHALL BE DONE BY AN I.S.A. CERTIFIED ARBORIST, CERTIFIED NURSERY PROFESSIONAL, OR UNDER THE DIRECTION THEREOF. DO NOT HEAVILY PRUNE SHRUBS AT PLANTING.
4). AUGERED HOLES SHALL BE HAND DUG TO FINAL WIDTH AND TO ELIMINATE GLAZING.
5). ALL SHRUB MASSES SHALL BE MULCHED AS ONE CONTINUOUS BED.

ROADSIDE SHRUB PLANTING DETAIL

DELAWARE DEPARTMENT OF TRANSPORTATION	PLANTING DETAILS		APPROVED CHIEF ENGINEER — DATE 10/10/06
	STANDARD NO. L-1 (2006)	SHT. 1 OF 3	RECOMMENDED DESIGN ENGINEER — DATE 10/9/06

08/04/2006

SCALE : N.T.S.



DO NOT PRUNE THE DOMINANT LEADER OR TERMINAL BUDS OF THE CROWN.

STAKE & GUY TREES. GUY WIRE, STAKES, & RUBBER HOSE SHALL BE AS SPECIFIED IN SECTION 737.

SET ROOT BALL FLUSH TO GRADE OR 1" (25) TO 2" (50) ABOVE GRADE IF SOILS ARE SLOW TO DRAIN. PLANT TREES SUCH THAT THE TRUNK FLARE IS VISIBLE. ANY TREE WHERE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

MULCH IN ACCORDANCE WITH SPECIFICATIONS. DO NOT PLACE MULCH AGAINST THE TRUNK.

TAMP SOIL AROUND THE ROOT BALL BASE WITH FOOT PRESSURE SO ROOT BALL DOES NOT SHIFT.

ALL SOIL SHALL BE EXCAVATED FROM THE PIT, MIXED WITH APPROVED AMENDMENTS AS PER SPECIFICATIONS AND USED AS BACKFILL DURING INSTALLATION OF TREES. PLACE ROOT BALL ON TAMPED OR UNEXCAVATED SOIL.

REMOVE BURLAP AND BASKETS TO 1/2 OF THE ROOT BALL. DO NOT BURY EXCESS BURLAP, ROPE OR REMNANTS OF BASKET IN THE PLANTING PIT.

NOTES

1). ALL PRUNING SHALL BE DONE BY OR UNDER THE DIRECTION OF, AN I.S.A. CERTIFIED ARBORIST OR CERTIFIED NURSERY PROFESSIONAL. DO NOT HEAVILY PRUNE TREES AT PLANTING.
2). ALL DEAD, BROKEN, & CROSSING BRANCHES SHALL BE PRUNED OFF FOLLOWING INSTALLATION.
3). BASE OF PLANTING PIT SIZE SHALL BE A MINIMUM WIDTH OF TWICE THE ROOT BALL SIZE AND A MAXIMUM OF THREE TIMES THE ROOT BALL SIZE.
4). WHEN PLANTING TREES ALONG STREETS, THERE MUST BE A MINIMUM OF 6' (1800) BETWEEN THE BACK OF CURB AND THE EDGE OF SIDEWALK AND SHALL BE CENTERED BETWEEN THE BACK OF CURB AND THE EDGE OF SIDEWALK.
5). WHEN PLANTING TREES ALONG SIDEWALKS, THE TREE SHALL BE LIMBED TO 7' (2100) FOR PEDESTRIAN CLEARANCE.

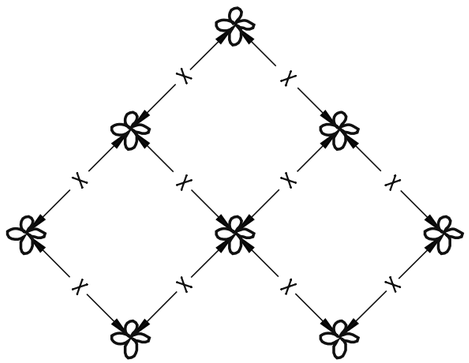
TREE PLANTING DETAIL

DELAWARE DEPARTMENT OF TRANSPORTATION	PLANTING DETAILS		APPROVED CHIEF ENGINEER	DATE 10/10/06
	STANDARD NO. L-1 (2006)	SHT. 2 OF 3	RECOMMENDED DESIGN ENGINEER	DATE 10/9/06

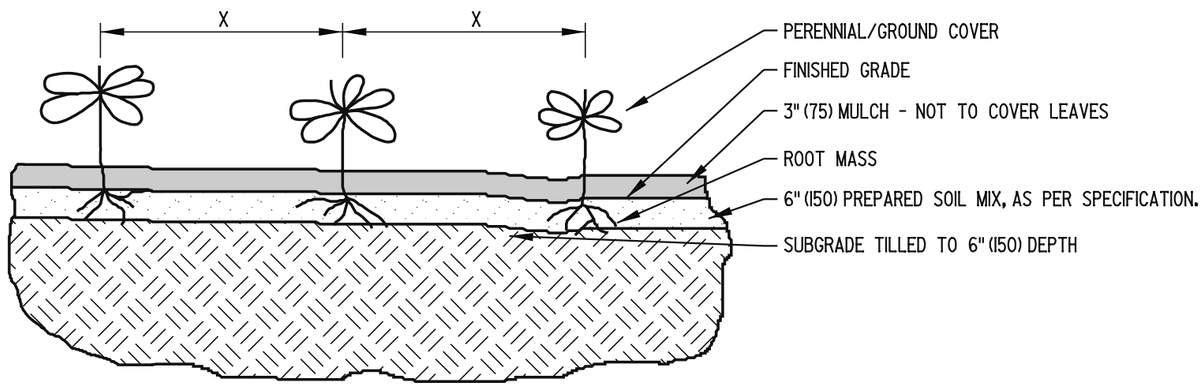
08/04/2006

SCALE : N.T.S.

NOTE:
1). SEE PLANT LIST FOR SPACING (X).



PLAN VIEW



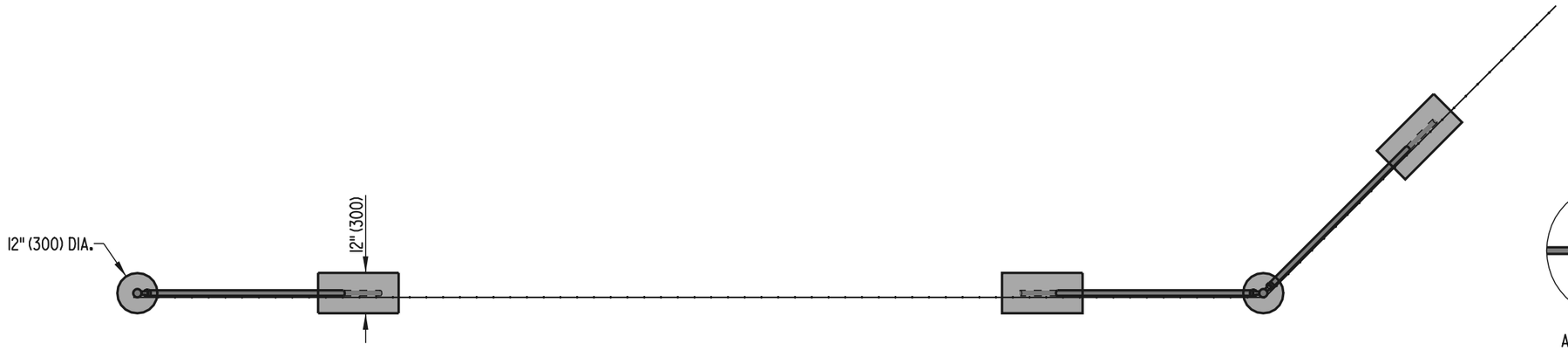
SECTION VIEW

PERENNIAL/GROUNDCOVER PLANTING DETAIL

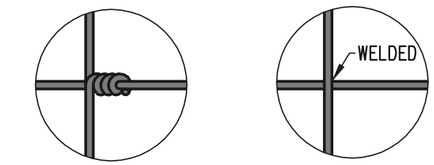
DELAWARE DEPARTMENT OF TRANSPORTATION	PLANTING DETAILS		APPROVED CHIEF ENGINEER	10/10/06 DATE
	STANDARD NO. L-1 (2006)	SHT. 3 OF 3	RECOMMENDED DESIGN ENGINEER	10/3/06 DATE

06/27/2006

SCALE : N.T.S.

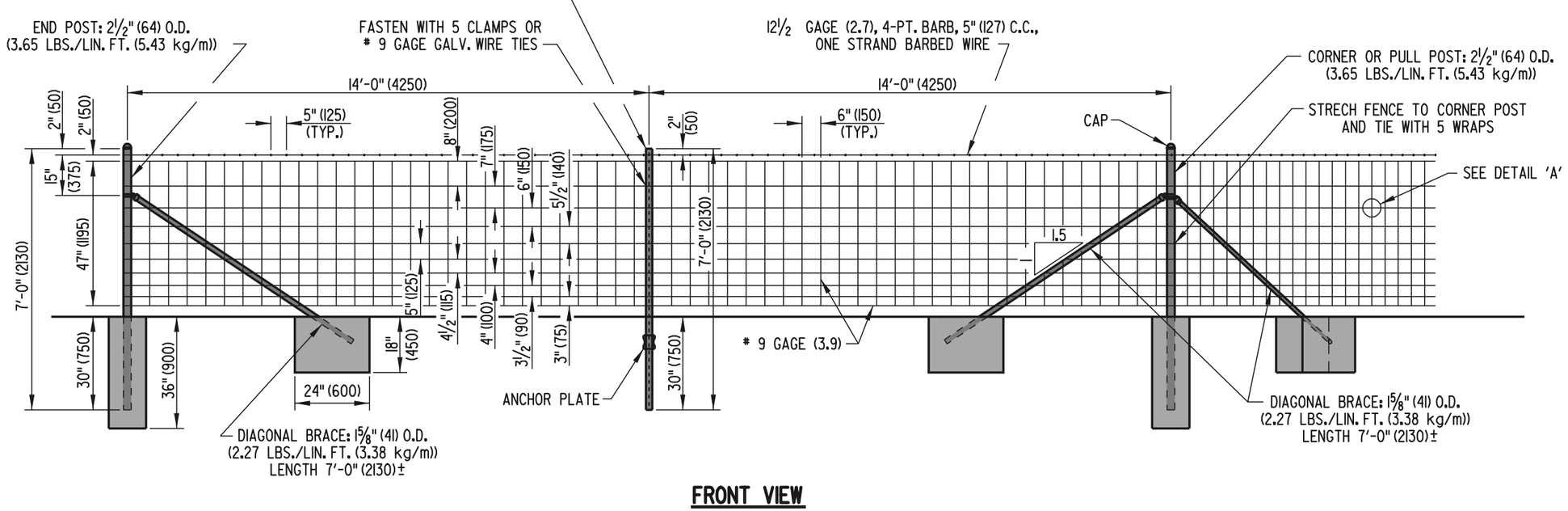


TOP VIEW



ALTERNATE METHODS OF SECURING VERTICAL
STAY WIRES TO THE HORIZONTAL WIRES OF THE FABRIC.

DEATAIL 'A'

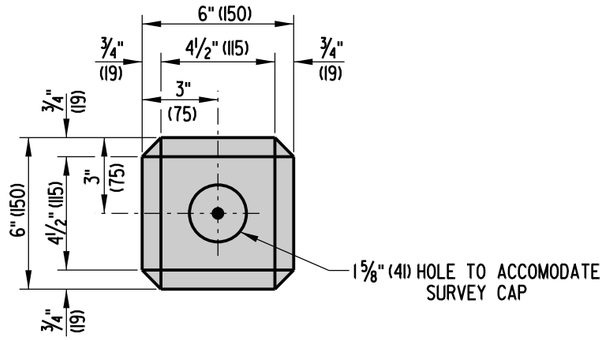


FRONT VIEW

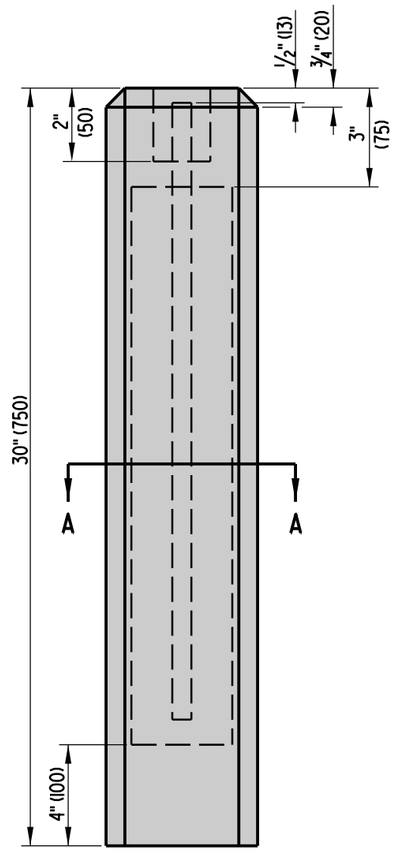
DELAWARE DEPARTMENT OF TRANSPORTATION	RIGHT-OF-WAY FENCE		APPROVED Eugene M. Hardesty CHIEF ENGINEER DATE 6/18/01
	STANDARD NO. M-1 (2001)	SHT. 1 OF 1	RECOMMENDED Michael A. Ayers DESIGN ENGINEER DATE 6/15/01

05/21/2001

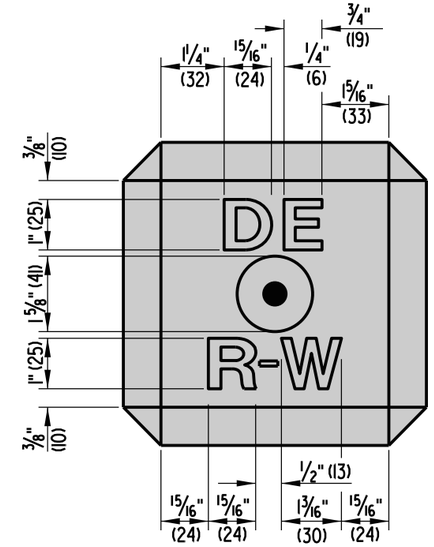
SCALE : N.T.S.



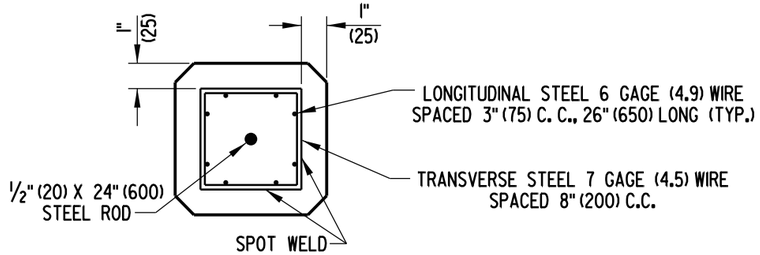
TOP



ELEVATION



TOP DETAIL



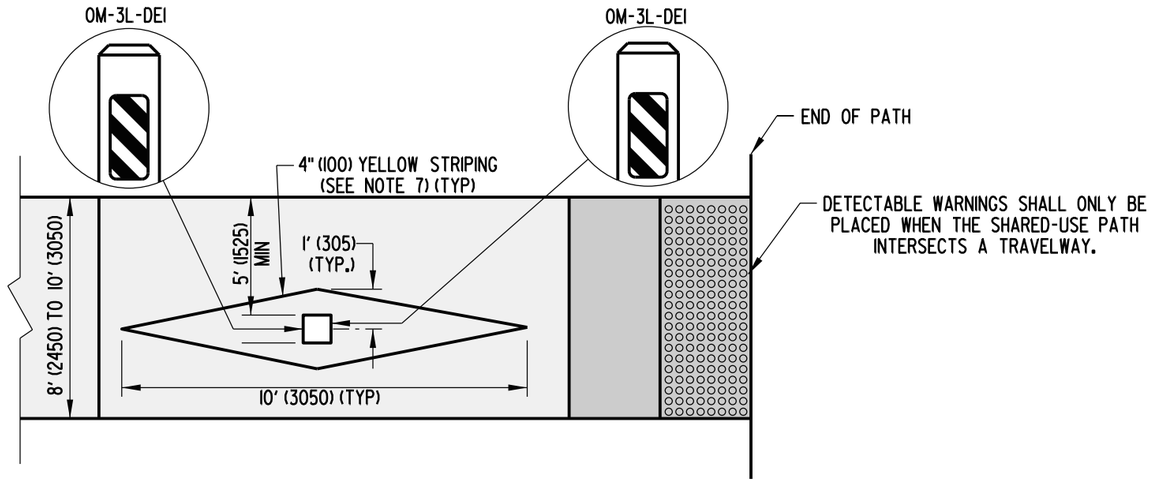
SECTION A-A

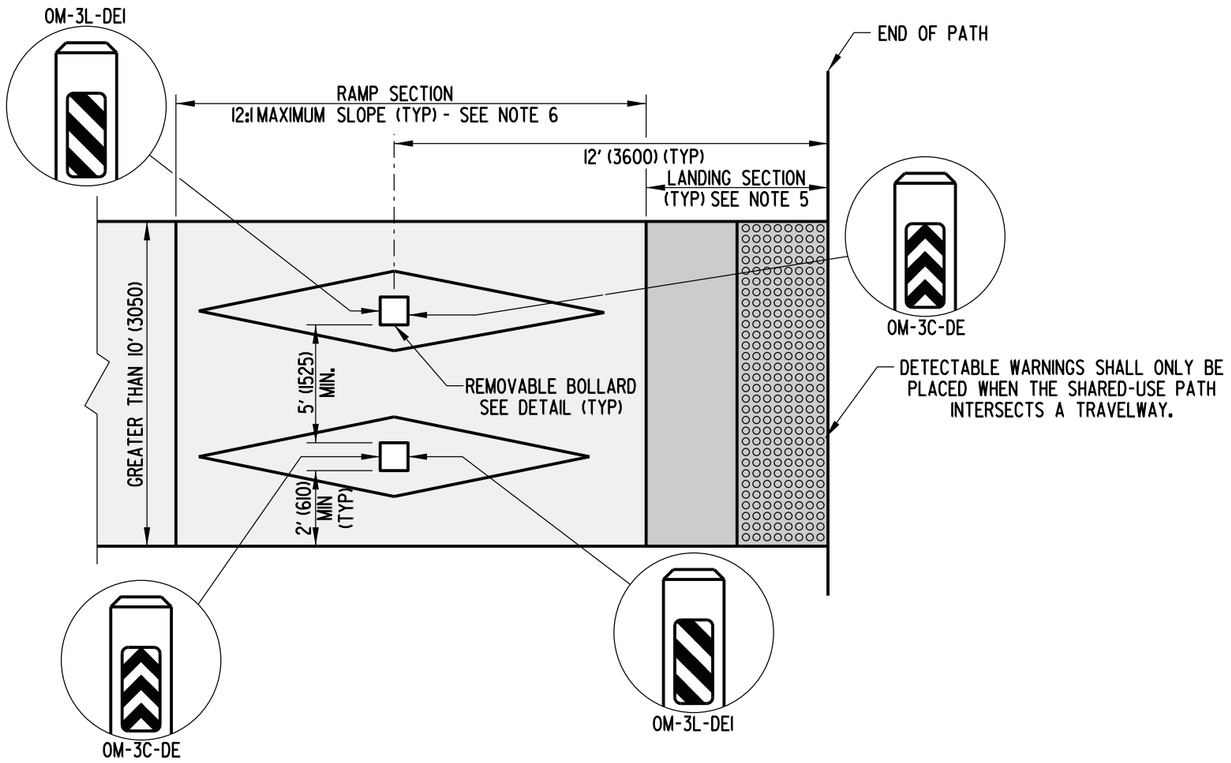
NOTES : 1. LONGITUDINAL STEEL SHALL BE HELD IN PLACE BY CRADLES.
2. LETTERS TO BE COUNTERSUNK IN TOP OF MARKER ¼" (6).

DELAWARE DEPARTMENT OF TRANSPORTATION	CONCRETE MONUMENT		APPROVED CHIEF ENGINEER	11/18/08 DATE
	STANDARD NO. M-2 (2008)	SHT. 1 OF 1	RECOMMENDED DESIGN ENGINEER	11/17/08 DATE

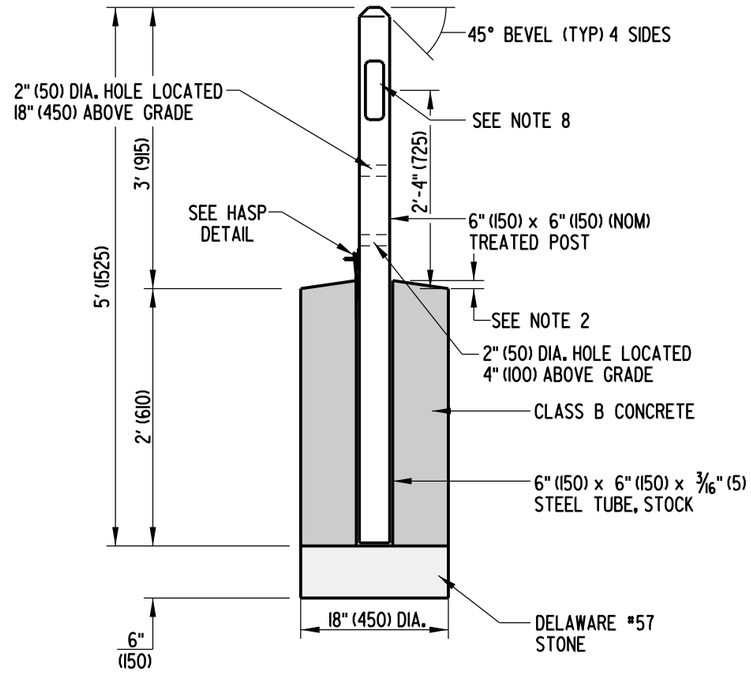
07/28/2008

SCALE : N.T.S.

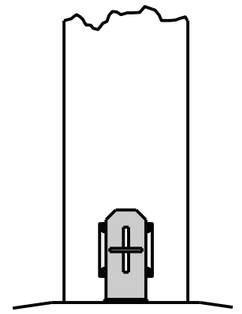




SHARED-USE PATH INTERSECTION



REMOVABLE BOLLARD



HASP DETAIL

LOWER PORTION OF HASP SHALL BE WELDED TO STEEL TUBE.

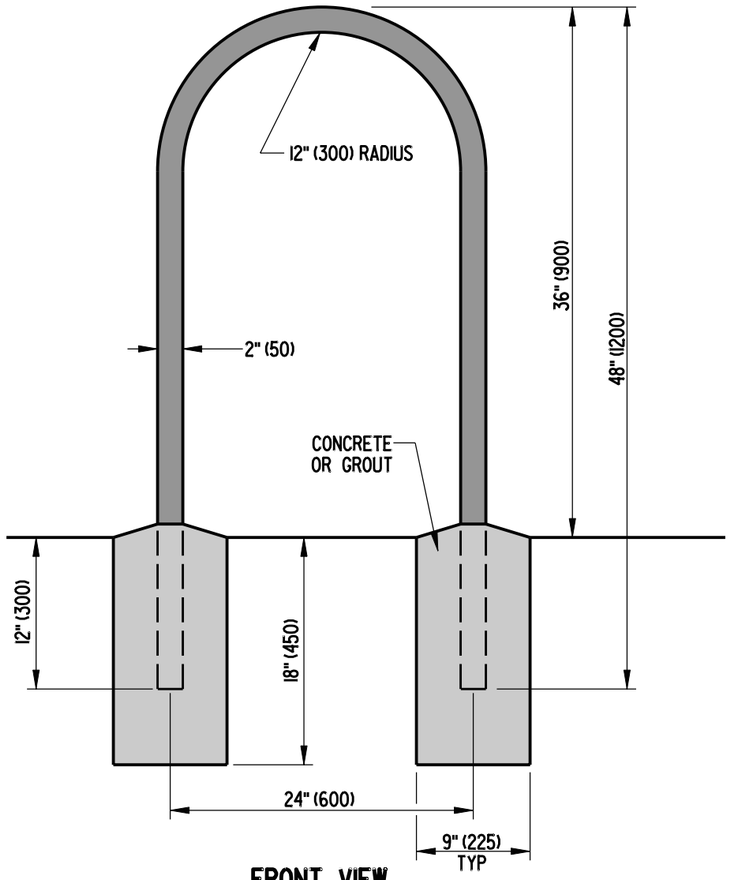
NOTES:

1). IF THE SHARED-USE PATH ENDS AT A ROADWAY OR RAILROAD CROSSING, THEN DETECTABLE WARNING TRUNCATED DOMES 24" (600) LONG AND THE FULL WIDTH OF THE PATH SHALL BE INSTALLED. SEE DETAIL C-2.
2). STEEL TUBE TO EXTEND ½" (13) ABOVE GROUND WITH CONCRETE TO SLOPE AWAY FROM TUBE TO KEEP WATER AND SEDIMENT FROM DRAINING INTO TUBE.
3). BOLLARDS ARE NOT REQUIRED FOR A SHARED-USE PATH LESS THAN 8' (2450) WIDE.
4). SHAVE THE POST AS NECESSARY SO THAT IT WILL FIT IN THE STEEL TUBE.
5). THE LANDING SECTION SHALL BE A MINIMUM OF 5' (1525) IN LENGTH AND SHALL HAVE A MAXIMUM CROSS SLOPE AND RUNNING SLOPE OF 2%. THE ENTIRE LANDING SECTION MUST ALSO BE CONCRETE.
6). THE RAMP SECTION SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%. IT SHALL ALSO HAVE A MAXIMUM RUNNING SLOPE OF 12:1. HOWEVER, IF A 12:1 RUNNING SLOPE DOES NOT ALLOW THE RAMP TO MEET EXISTING GRADE WITHIN 15' (4200), THE RUNNING SLOPE MAY EXCEED 12:1.
7). STRIPING MATERIAL TO BE DETERMINED BY THE ENGINEER BASED ON THE MATERIAL THAT THE STRIPING IS BEING PLACED ON.
8). THE APPROPRIATE TYPE 3 OBJECT MARKER SHALL BE PLACED ON THE FRONT AND BACK OF EACH BOLLARD AS PER THIS DETAIL.

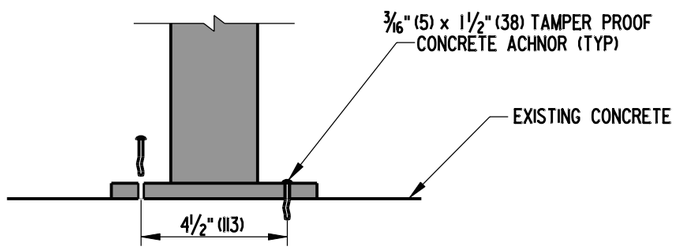
DELAWARE DEPARTMENT OF TRANSPORTATION	BOLLARD & SHARED-USE PATH DETAILS	APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/19/2010 (DATE)
	STANDARD NO. M-3 (2009) — SHT. 1 OF 1	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 01/14/2010 (DATE)

01/06/2010

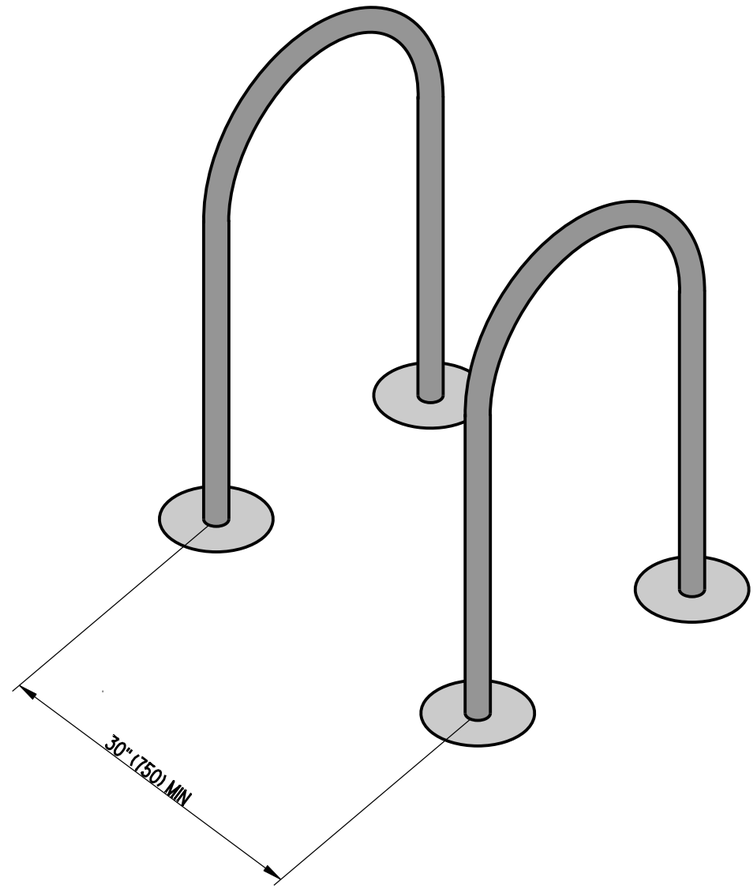
SCALE : N.T.S.



FRONT VIEW



ALTERNATE ANCHOR OPTION
SECTION VIEW

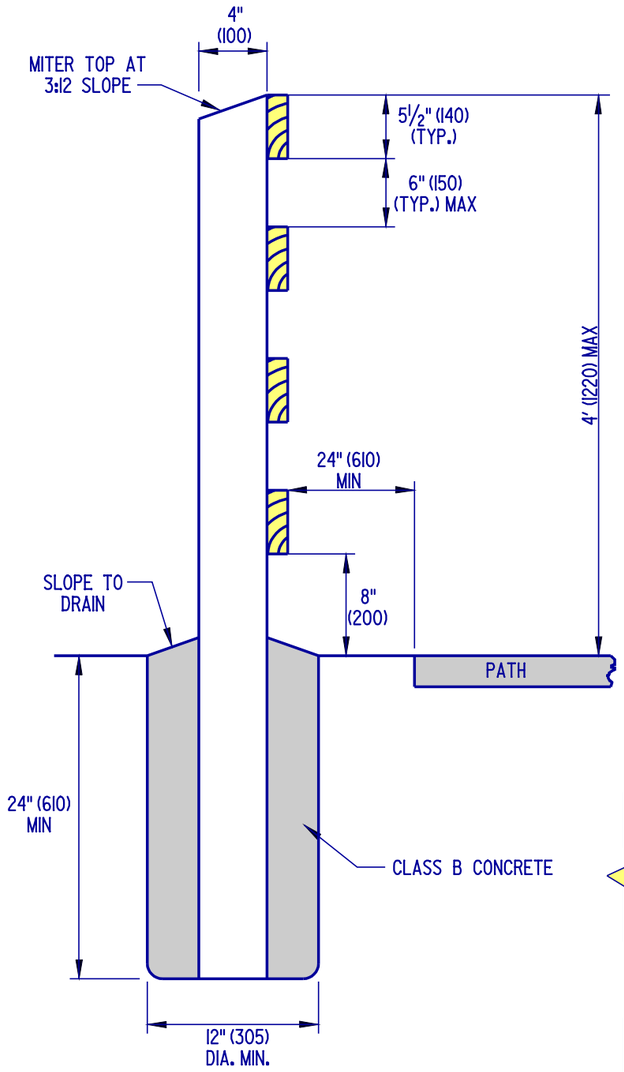


ISOMETRIC VIEW
4 BIKE INSTALLATION

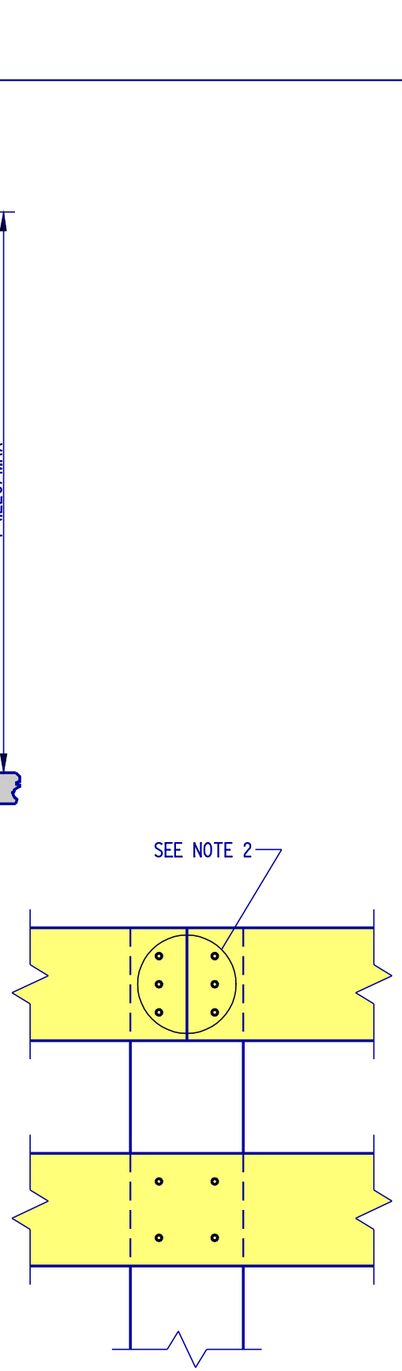
DELAWARE DEPARTMENT OF TRANSPORTATION	BIKE RACK DETAILS		APPROVED CHIEF ENGINEER 10/24/07 DATE
	STANDARD NO. M-4 (2007)	SHT. 1 OF 1	RECOMMENDED DESIGN ENGINEER 10/23/07 DATE

04/03/2007

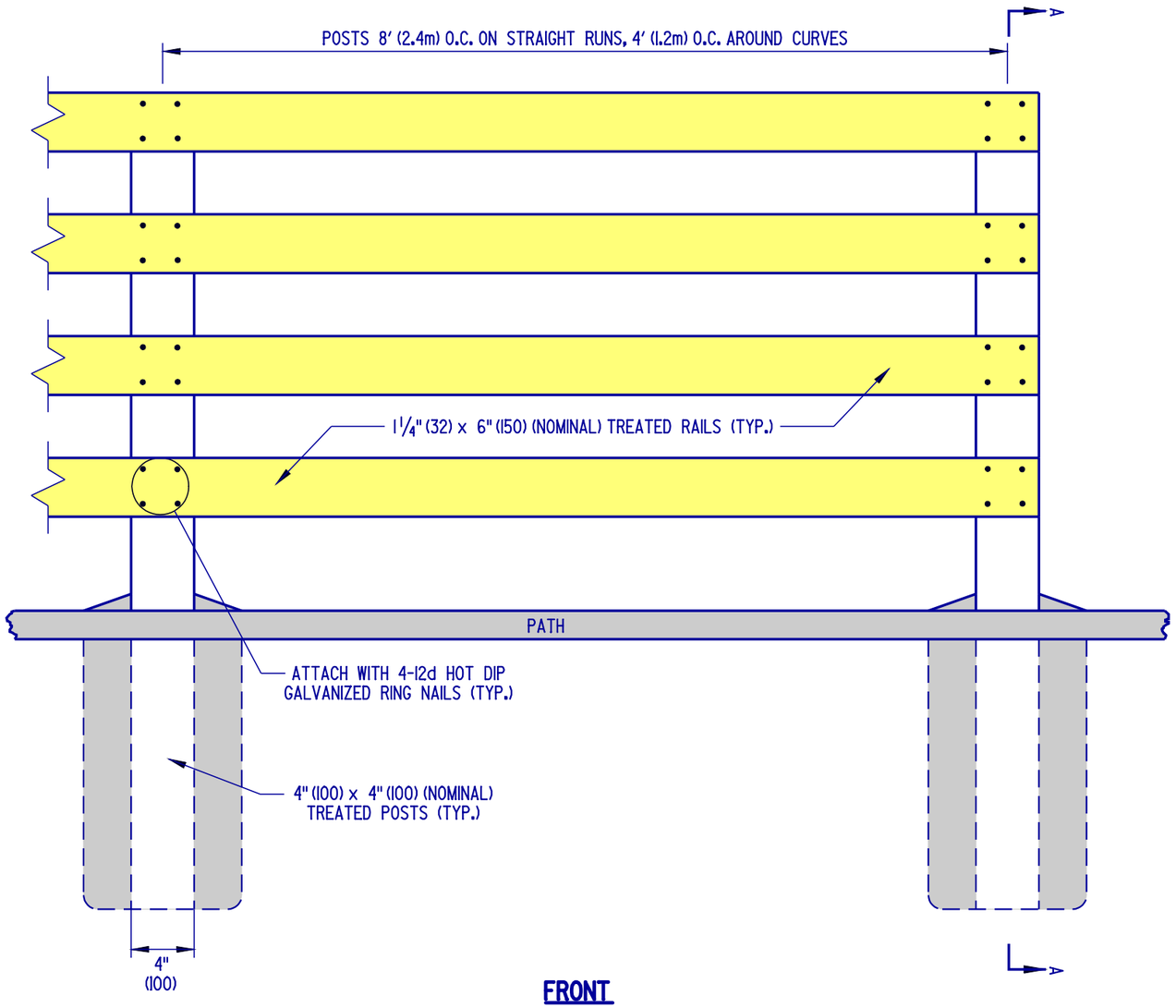
SCALE : N.T.S.



SECTION A-A



TYPICAL JOINT DETAIL



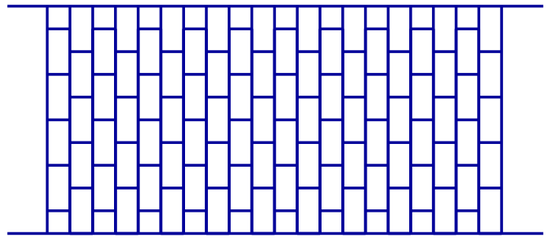
FRONT

NOTES:
1. ALL RAIL JOINTS SHALL BE CENTERED AT THE POSTS.
2. ALL JOINTS SHALL BE ATTACHED WITH 3 - 12d NAILS AND TWO ADJACENT RAILS SHALL NOT END ON THE SAME POST.
3. RAILS SHALL BE FLUSH TO THE POSTS AT THE END POSTS.

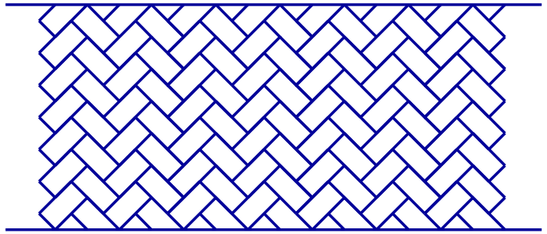
DELAWARE DEPARTMENT OF TRANSPORTATION	WOOD RAIL FENCE DETAILS		APPROVED Carolann Wicks CHIEF ENGINEER 1/10/05 DATE
	STANDARD NO. M-5 (2004)	SHT. 1 OF 1	RECOMMENDED Dennis M. O'Toole DESIGN ENGINEER 1/3/05 DATE

09/27/2004

SCALE : N.T.S.



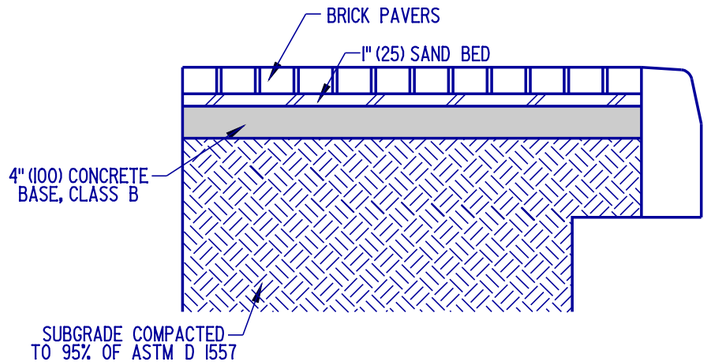
4" (100) x 8" (200) RUNNING BOND PATTERN



4" (100) x 8" (200) HERRINGBONE PATTERN

NOTES:

1. ACTUAL PATTERN TO BE USED SHALL BE SPECIFIED ON THE PLANS. COLOR IS TO BE "BRICK RED" UNLESS OTHERWISE NOTED ON THE PLANS.
2. MATERIALS AND PAVEMENT BOX VARY DEPENDING ON PLANS.
3. FOR CROSSWALK APPLICATIONS, 8" (200) WHITE LINES SHOULD BE PLACED ON BOTH SIDES.
4. THE PATTERNS ABOVE ARE THE PREFERRED PATTERNS AVAILABLE FOR SIDEWALK OR CROSSWALK APPLCATIONS.



BRICK PAVER SIDEWALK DETAIL

NOTES:

1. ALL PAVERS ARE TO BE "BRICK RED" UNLESS OTHERWISE SPECIFIED ON THE PLANS. THE PATTERN SHALL BE SPECIFIED ON THE PLANS.
2. EXPANSION JOINT MAY BE NEEDED ON NON-CURB SIDE OF BRICK PAVER SIDEWALK IF THAT SIDE IS AGAINST BUILDING OR OTHER CONFINING FEATURE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

PATTERNED HOT-MIX OR CONCRETE & BRICK PAVER DETAILS

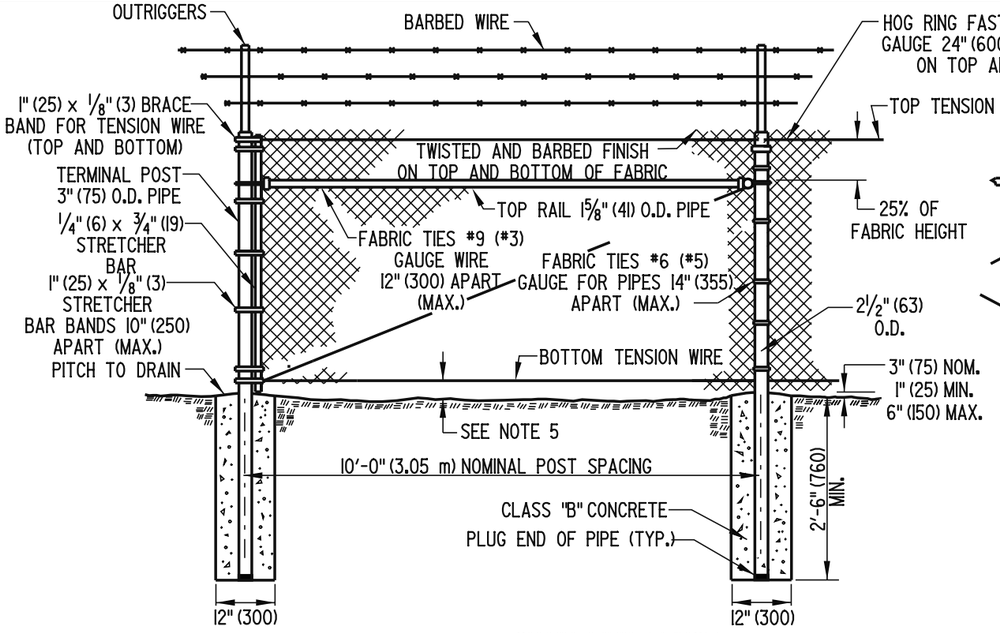
STANDARD NO. M-6 (2004) | SHT. 1 OF 1

APPROVED Carolann Wicks CHIEF ENGINEER 1/10/05 DATE

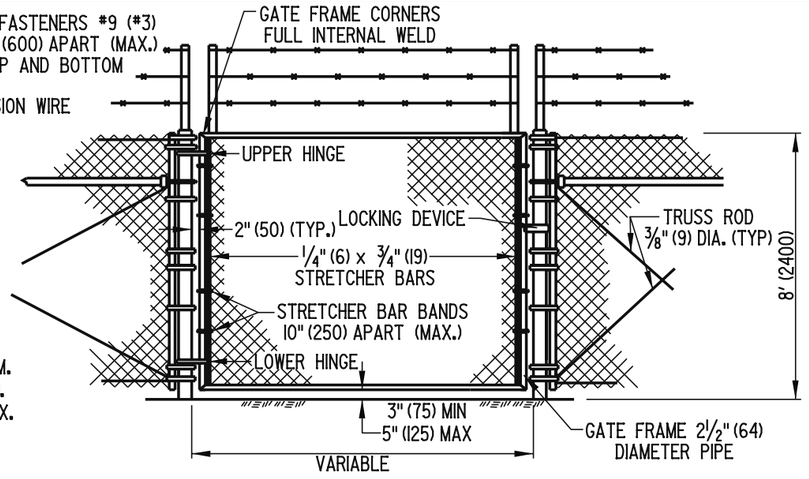
RECOMMENDED Dennis M. O'Toole DESIGN ENGINEER 1/3/05 DATE

09/24/2004

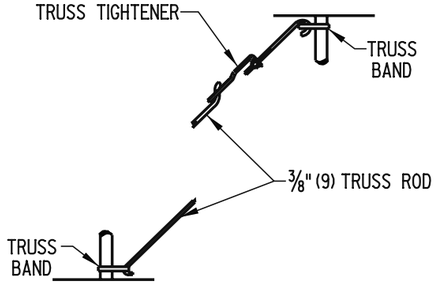
SCALE : N.T.S.



CHAIN-LINK FENCE



GATES, CHAIN-LINK FENCE



3/8" (9) TRUSS ROD ASSEMBLY

CHAIN-LINK FENCE ASSEMBLIES

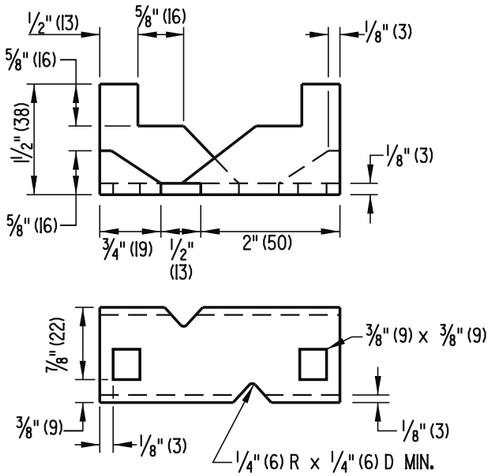
TENSION WIRE CONNECTION AT ROUND INTERMEDIATE OR CORNER POST

GENERAL NOTES

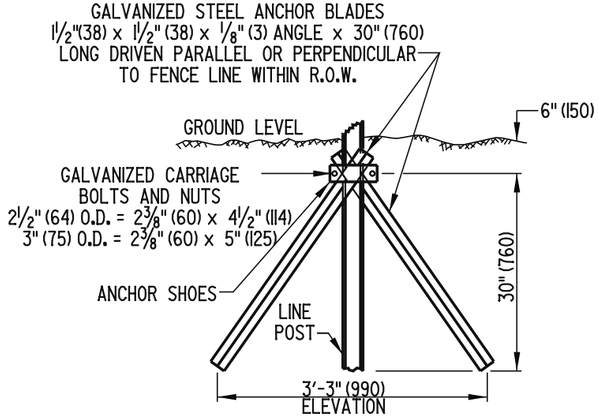
1). POSTS

	TERMINAL, CORNER AND GATE POSTS	LINE POSTS	TOP OR BRACE RAIL
	3" (75) O.D. PIPE	2 1/2" (64) O.D. PIPE	1 5/8" (41) O.D. PIPE
AASHTO TYPE	I OR II	I OR II	I OR II
AASHTO GRADE	I OR 2	I OR 2	I OR 2
MINIMUM LENGTH OF POST:	10'-8" (3250)	10'-8" (3250)	N/A
ACTUAL OUTSIDE DIAMETER	2 7/8" (73)	2 3/8" (60)	1.660" (42)
WALL THICKNESS	GRADE I = .203" (5.2) GRADE 2 = .160" (4)	GRADE I = .154" (3.9) GRADE 2 = .120" (3)	GRADE I = .140" (3.5) GRADE 2 = .111" (2.8)

2). THE DEPTH OF CONCRETE FOOTERS IN SOLID ROCK MAY BE REDUCED TO 12" (300) BELOW THE TOP OF ROCK AND THE DIAMETER OF THE HOLE IN ROCK MAY BE REDUCED TO 6" (150).
3). BRACE BANDS AND STRETCHER BAR BANDS SHALL BE FURNISHED WITH 5/16" (8) DIA. CARRIAGE BOLTS AND ELASTIC STOP NUTS.
4). DRIVE ANCHOR SHOE ASSEMBLY ONLY TO BE USED IN WET AREAS AND WITH PRIOR APPROVAL OF THE ENGINEER.
5). THE BOTTOM OF THE FENCE SHALL BE 2" (50) MAX ABOVE HARD GROUND OR PAVEMENT. WHERE THERE IS SOFT GROUND, THE BOTTOM OF THE FENCE SHALL EXTEND INTO THE GROUND IN ORDER TO BE FIRM DUE TO SHIFTING SOIL OR SAND.
6). NUTS AND BOLTS SHALL BE TACK WELDED OR BURRED TO PREVENT REMOVAL.
7). IF THERE ARE ANY OPENINGS IN THE FENCE LARGER THAN 96 SQ. IN. (620 sq. cm) DUE TO UTILITIES OR GRADED TERRAIN, THE OPENINGS SHALL BE SECURED WITH A METAL GRILL THAT IS LOCKED OR PERMANENTLY WELDED.
8). VEGETATION AND PERMANENT STRUCTURES (SUCH AS BUILDINGS, LIGHT POLES, AND UTILITY POLES) SHALL BE AT LEAST 14' (4.2 m) FROM THE FENCE. ANY EXCEPTIONS SHALL REQUIRE THE CONSTRUCTION OF TOP GUARDS.



ANCHOR SHOE



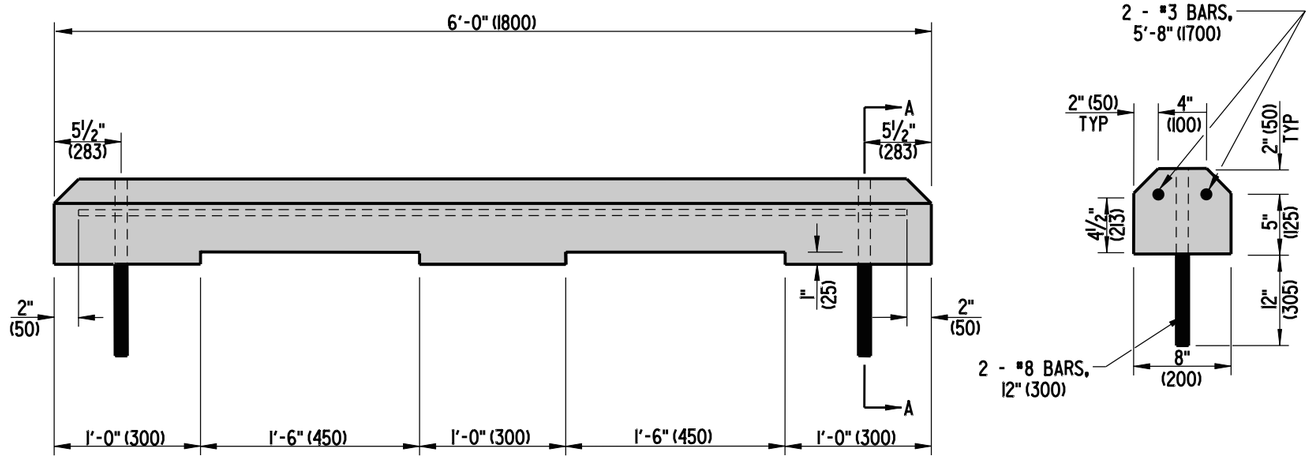
DRIVE ANCHOR SHOE ASSEMBLY

(SEE NOTE 4)

DELAWARE DEPARTMENT OF TRANSPORTATION	CHAIN LINK FENCE DETAILS		APPROVED _____ CHIEF ENGINEER DATE 10/10/06
	STANDARD NO. M-7 (2006)	SHT. 1 OF 1	RECOMMENDED _____ DESIGN ENGINEER DATE 10/3/06

06/27/2006

SCALE : N.T.S.



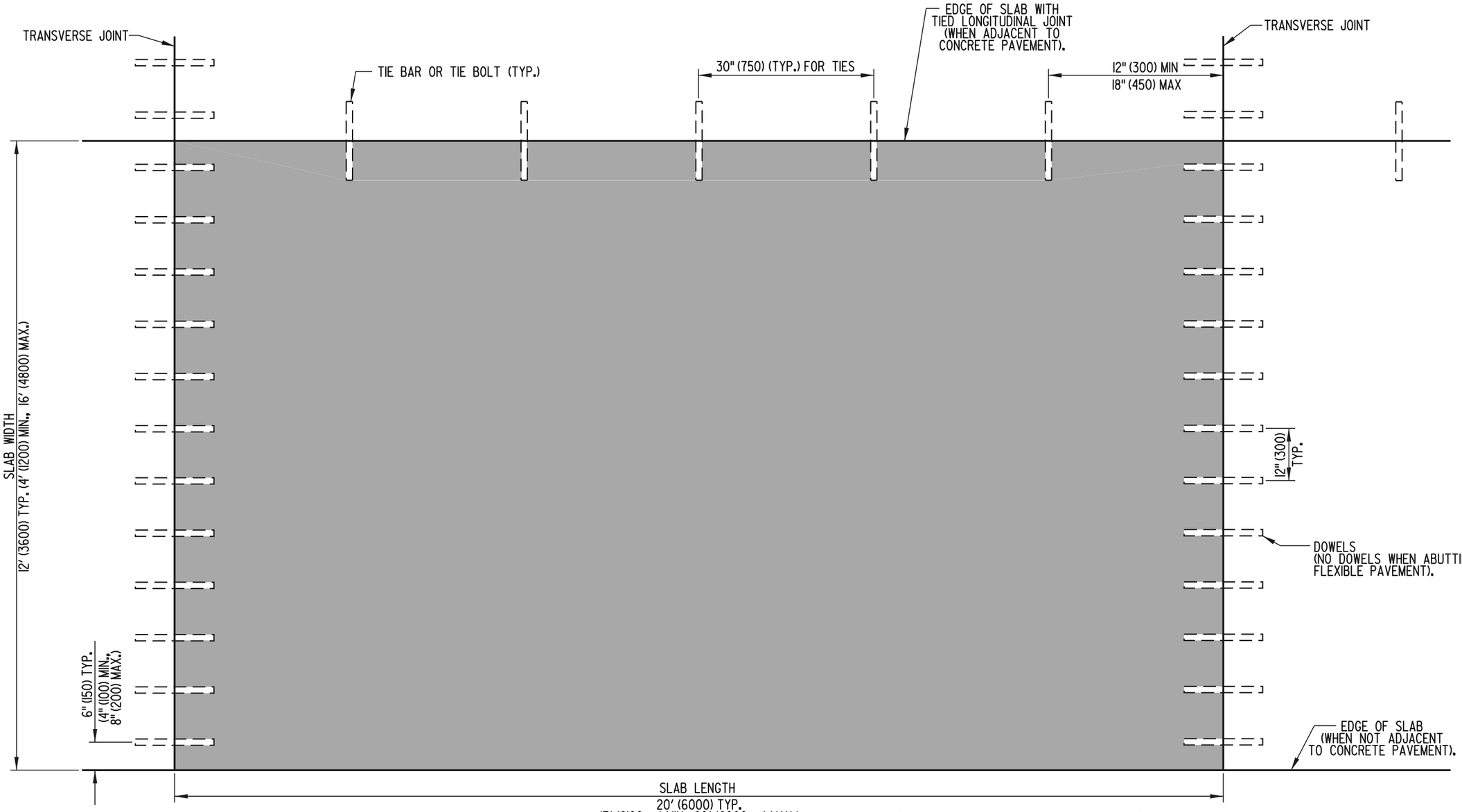
ELEVATION

SECTION A-A

DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PARKING BUMPER		APPROVED CHIEF ENGINEER 10/24/07 DATE
	STANDARD NO. M-8 (2007)	SHT. 1 OF 1	RECOMMENDED DESIGN ENGINEER 10/23/07 DATE

08/01/2007

SCALE : N.T.S.



NOTES:

1). TRANSVERSE JOINTS ARE PERPENDICULAR TO THE CENTERLINE OF THE PAVEMENT WHEN THE PAVEMENT IS STRAIGHT.

2). TRANSVERSE JOINTS ARE PERPENDICULAR TO A TANGENT LINE TO THE OUTSIDE ARC OF THE PAVEMENT WHEN THE PAVEMENT IS CURVED.

3). ALIGN THE TRANSVERSE JOINTS FOR ALL ADJACENT SLABS WITH EACH OTHER.

4). ABRUPT CHANGES IN PAVEMENT WIDTH MAY OCCUR ONLY AT THE TRANSVERSE JOINT LINE; LONGITUDINAL JOINTS SHALL BE CONTINUOUS WHENEVER POSSIBLE.

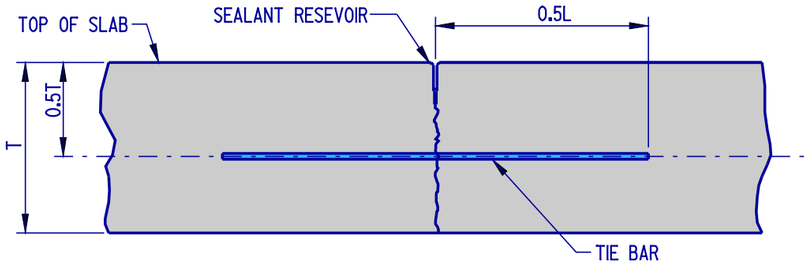
5). LONGITUDINAL JOINTS SHOULD NOT BE LOCATED WITHIN PROPOSED WHEEL PATHS. THE WHEEL PATH IS GENERALLY LOCATED 2' (600) INSIDE OF THE LANE EDGELINE OR CENTERLINE.

SLAB PLAN (WITH DOWEL AND TIE LOCATIONS)

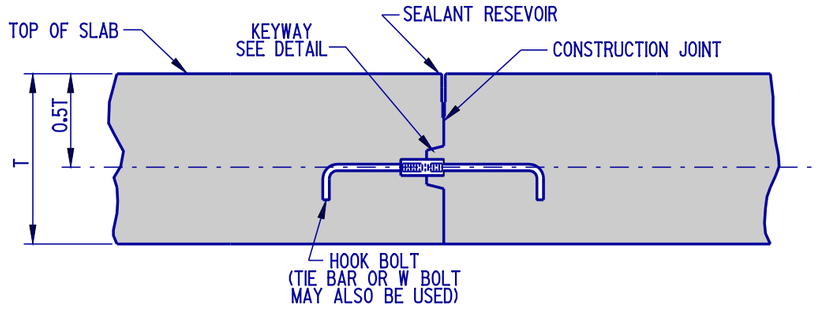
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT		APPROVED Lynne M. Hartnett CHIEF ENGINEER 6/18/01 DATE
	STANDARD NO. P-1 (2001)	SHT. 1 OF 5	RECOMMENDED DESIGN ENGINEER 6/15/01 DATE

04/18/2001

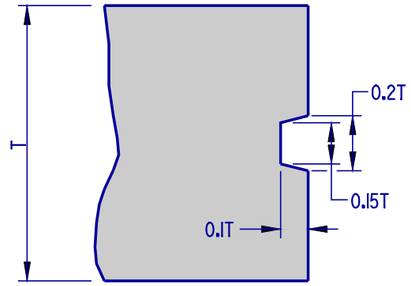
SCALE : N.T.S.



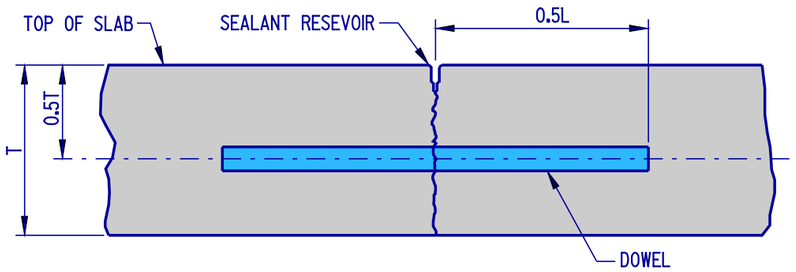
LONGITUDINAL SAW-CUT JOINT DETAIL



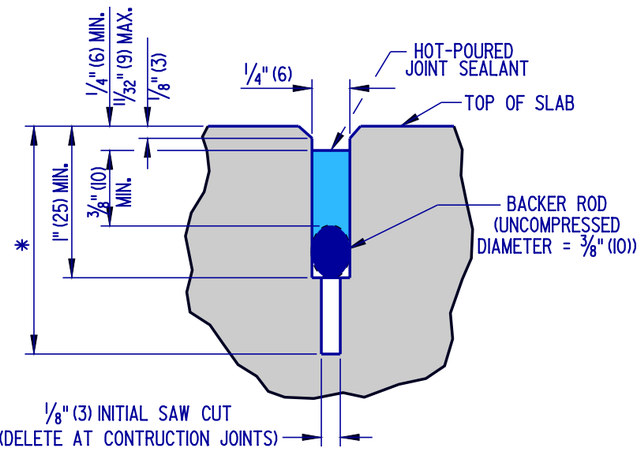
LONGITUDINAL CONSTRUCTION JOINT DETAIL



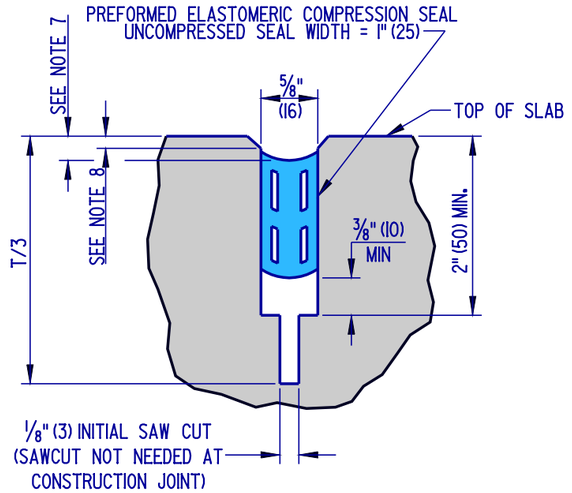
KEYWAY DETAIL



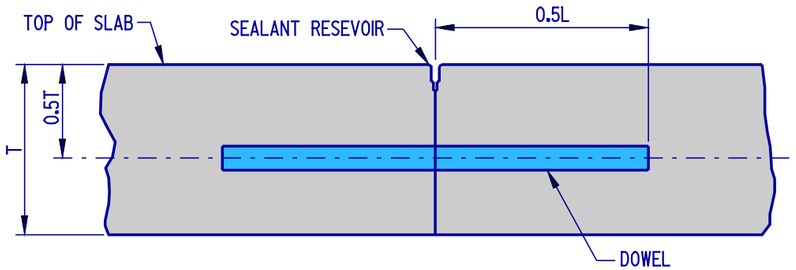
TRANSVERSE SAW-CUT JOINT DETAIL



SEALANT DETAIL- LONGITUDINAL JOINT



SEALANT DETAIL- TRANSVERSE JOINT



TRANSVERSE CONSTRUCTION JOINT DETAIL

* - 0.3T (10" (250) P.C.C. PAVEMENT)
0.4T (12" (300) P.C.C. PAVEMENT)

NOTES:

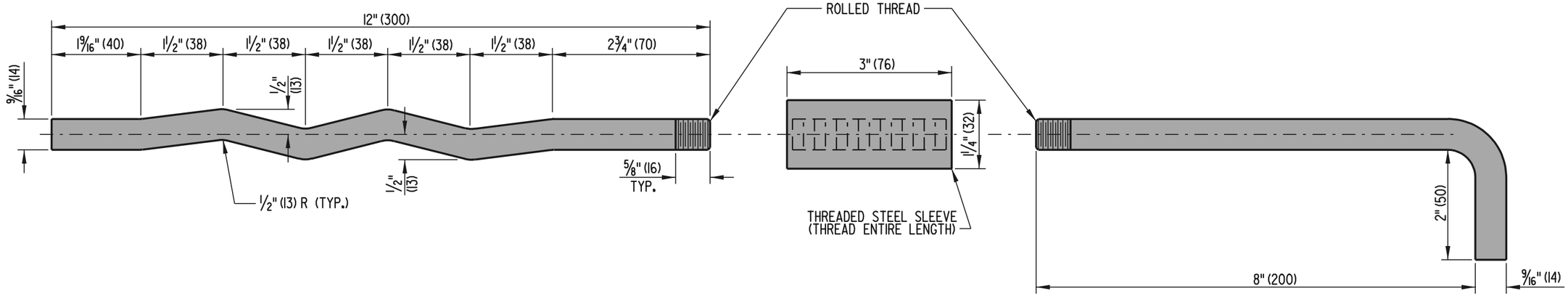
1). AS DIMENSIONED, THE WIDTH OF THE TRANSVERSE SEALANT RESERVOIR IS APPLICABLE WHEN THE TEMPERATURE OF THE PAVEMENT SURFACE IS BETWEEN 60°F (16°C) AND 80°F (27°C). WHEN THE TEMPERATURE IS BELOW 60°F (16°C), THE SEALANT RESERVOIR SHALL BE CUT 1/16" (2) WIDER. WHEN THE TEMPERATURE IS ABOVE 80°F (27°C), THE SEALANT RESERVOIR SHALL BE CUT 1/16" (2) NARROWER.
2). "T" REFERS TO THE ACTUAL CONSTRUCTED SLAB THICKNESS.
3). TOLERANCE ON ALL JOINT SEALANT DETAIL DIMENSIONS SHOWN WITHOUT RANGES SHALL BE PLUS 1/16" (2), MINUS 0" (0).
4). THE TOP EDGES OF THE CONTACT SURFACES OF THE SEALANT MATERIAL ON BOTH SIDES OF THE JOINT RESERVOIR SHALL BE AT THE SAME ELEVATION.
5). TRANSVERSE JOINT MATERIAL SHALL BE PLACED BEFORE LONGITUDINAL JOINT MATERIAL; THE TRANSVERSE JOINT MATERIAL SHALL BE CONTINUOUS FOR THE FULL WIDTH OF ALL ADJACENT P.C.C. PAVEMENT SLABS.
6). LONGITUDINAL JOINT MATERIAL SHALL BE PLACED WITHOUT GAPS WHENEVER INTERRUPTED BY THE TRANSVERSE JOINT MATERIAL.
7). TRANSVERSE JOINT SEAL TO BE RECESSED 3/16" (5) TO 5/16" (8) BELOW THE TOP OF THE SLAB.
8). A 45° CHAMFER SHALL BE CUT 1/8" (3) TO 1/4" (6) DEEP AT THE TOP OF THE SLAB ALONG BOTH SIDES OF THE TRANSVERSE SEALANT RESERVOIR.
9). THE TOP EDGES OF THE COMPRESSION SEAL SHALL BE IN FULL CONTACT WITH THE SLAB SIDES.

JOINT AND SEALANT DETAILS

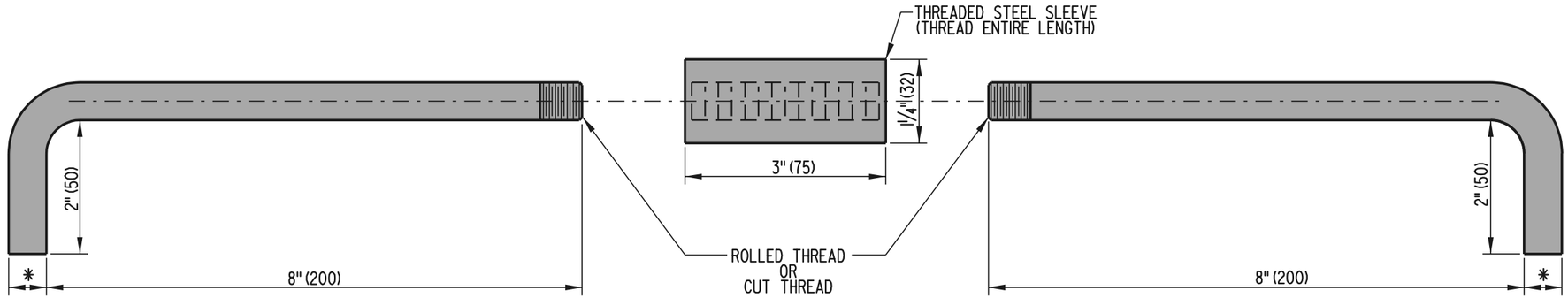
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT		APPROVED Carolann Wicks CHIEF ENGINEER 1/10/05 DATE
	STANDARD NO. P-1 (2004)	SHT. 2 OF 5	RECOMMENDED Dennis M. Office DESIGN ENGINEER 1/3/05 DATE

10/01/2004

SCALE : N.T.S.

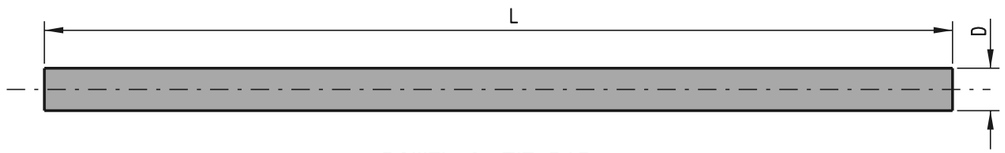


W BOLT



HOOK BOLT

* -11/16" (17) ROLLED THREADS
  3/4" (19) CUT THREADS



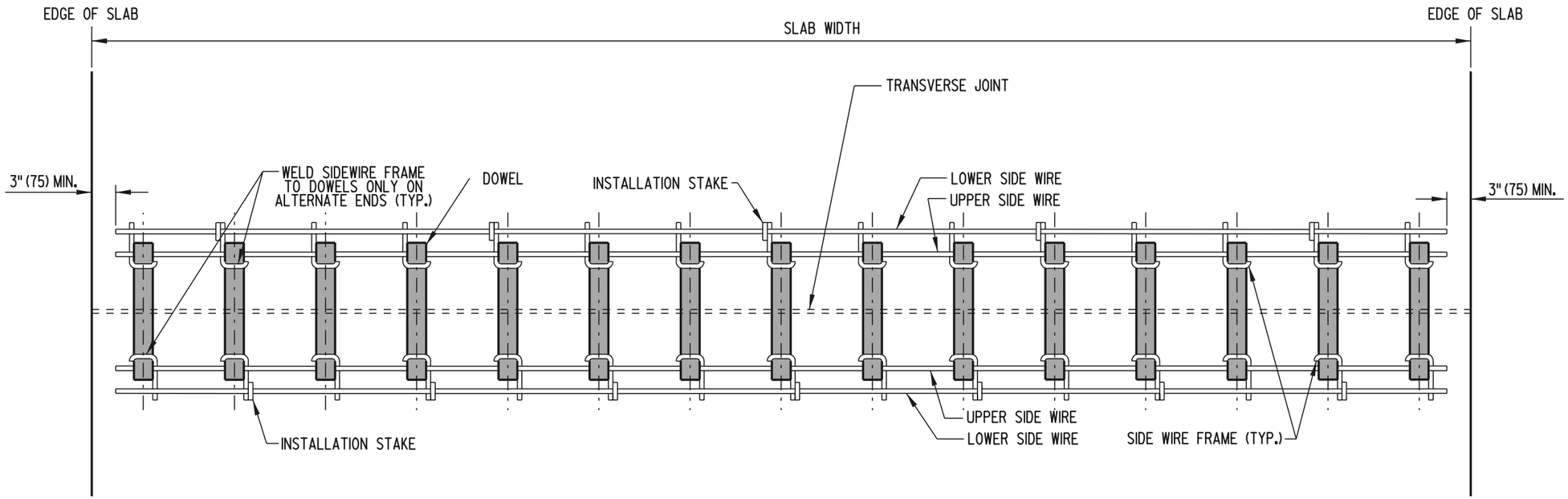
DOWEL & TIE BAR

DOWEL & TIE BAR CHART				
SLAB THICKNESS	DOWEL		TIE BAR	
	D	L	D	L
10" (250)	1 1/4" (32)	18" (450)	5/8" (16)	30" (750)
12" (300)	1 1/2" (38)	20" (500)	5/8" (16)	30" (750)

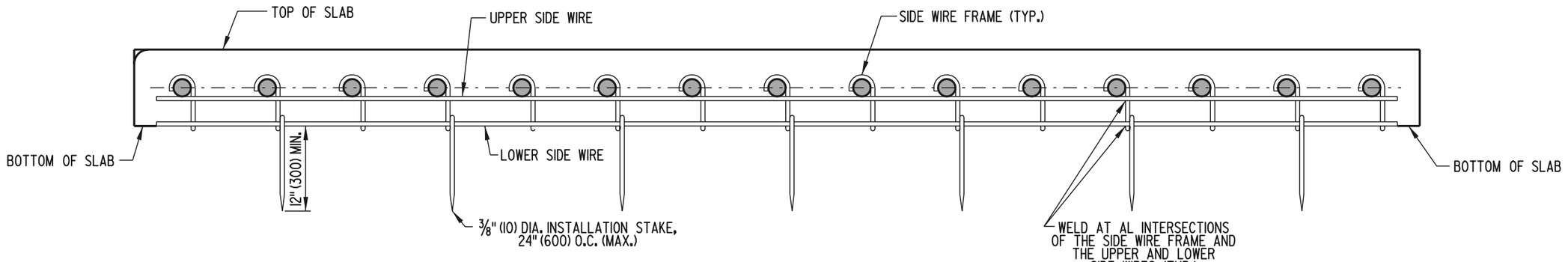
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT		APPROVED Lynne M. Harbeson CHIEF ENGINEER 6/18/01 DATE
	STANDARD NO. P-1 (2001)	SHT. 3 OF 5	RECOMMENDED Michael A. Agostini DESIGN ENGINEER 6/15/01 DATE

05/22/2001

SCALE : N.T.S.



PLAN



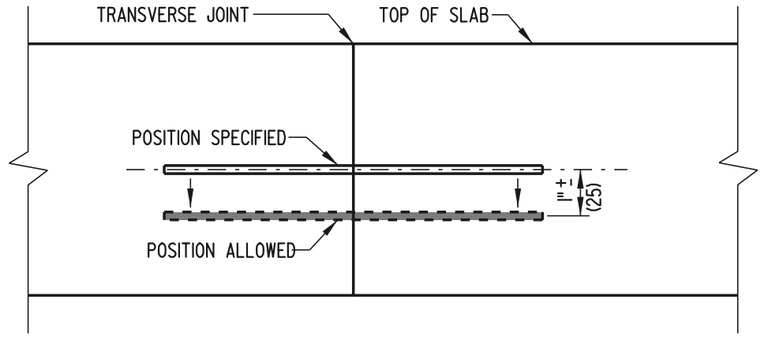
ELEVATION

DOWEL SUPPORT BASKET

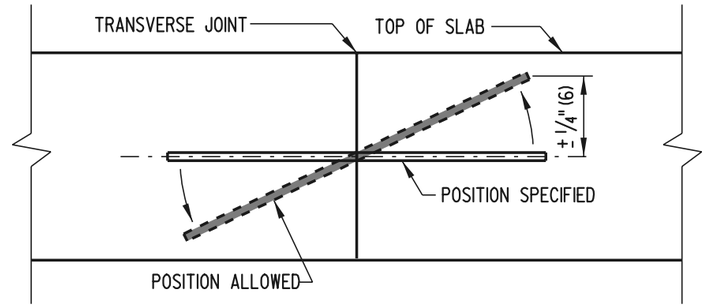
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT		APPROVED Lynne M. Hastings CHIEF ENGINEER DATE 6/18/01
	STANDARD NO. P-1 (2001)	SHT. 4 OF 5	RECOMMENDED [signature] DESIGN ENGINEER DATE 6/15/01

04/18/2001

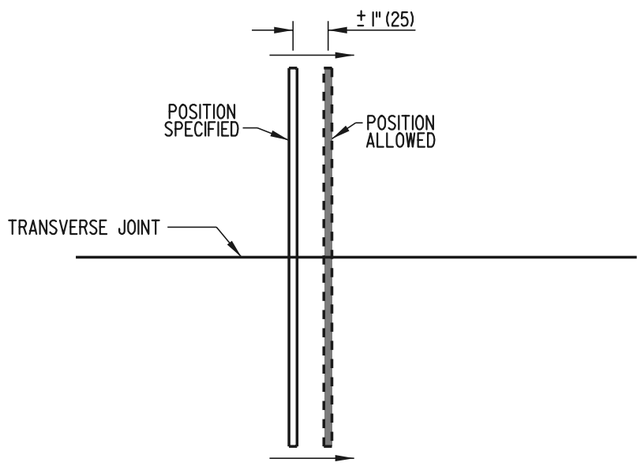
SCALE : N.T.S.



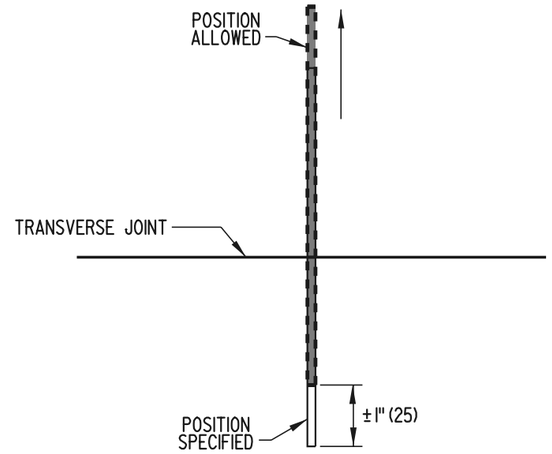
VERTICAL TRANSLATION



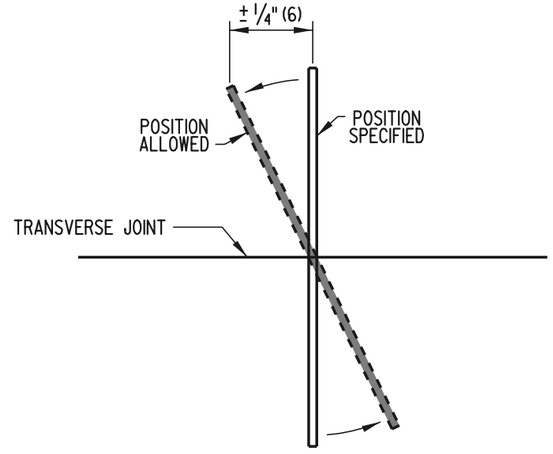
VERTICAL ROTATION



HORIZONTAL TRANSLATION



LONGITUDINAL TRANSLATION

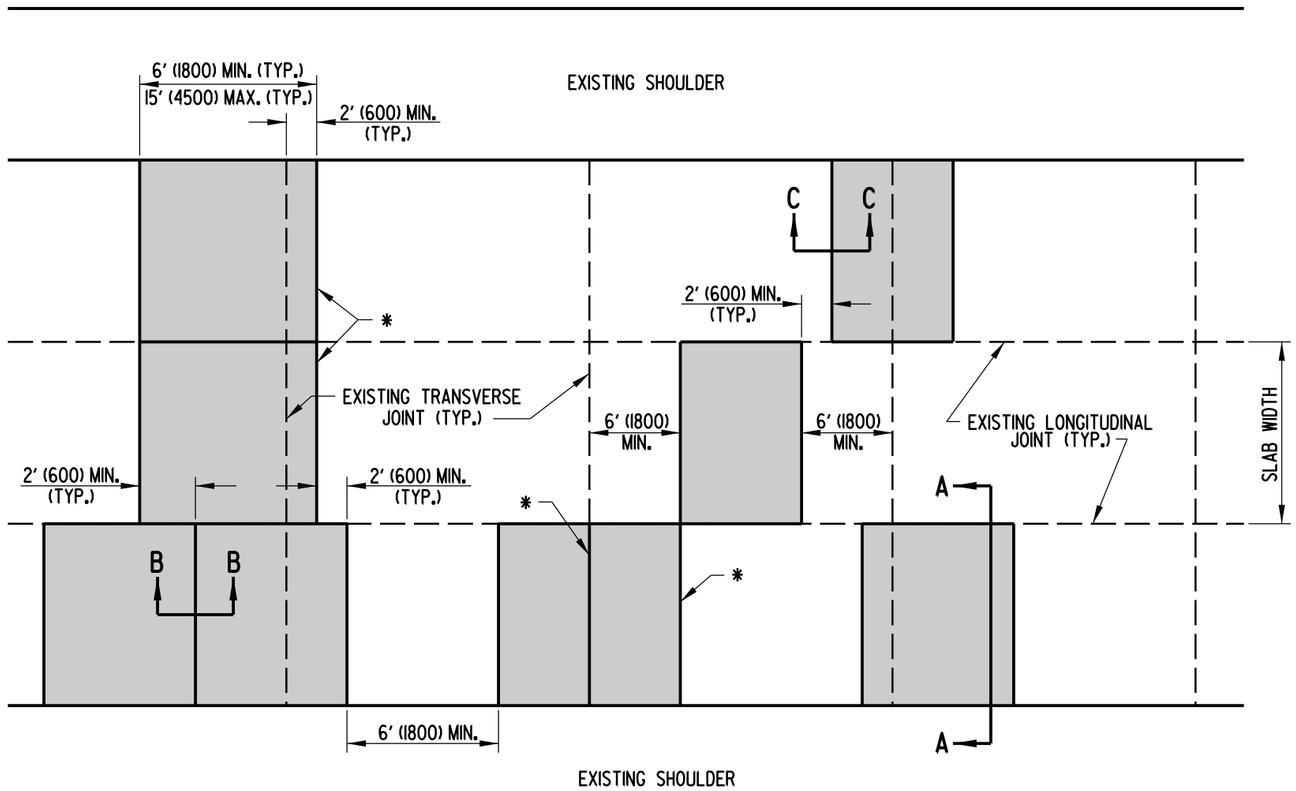


HORIZONTAL ROTATION

DOWEL & TIE BAR PLACEMENT TOLERANCES

DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT			APPROVED Lynne M. Hartnett CHIEF ENGINEER DATE 6/18/01
	STANDARD NO. P-1 (2001)	SHT. 5	OF 5	RECOMMENDED [signature] DESIGN ENGINEER DATE 6/15/01

04/18/2001



PLAN

* - PROPOSED LOCATIONS FOR TRANSVERSE JOINTS SHALL EXACTLY MATCH THE ALIGNMENT OF THE FINAL (EXISTING OR RELOCATED) TRANSVERSE JOINTS IN ALL IMMEDIATELY ADJACENT LANES.

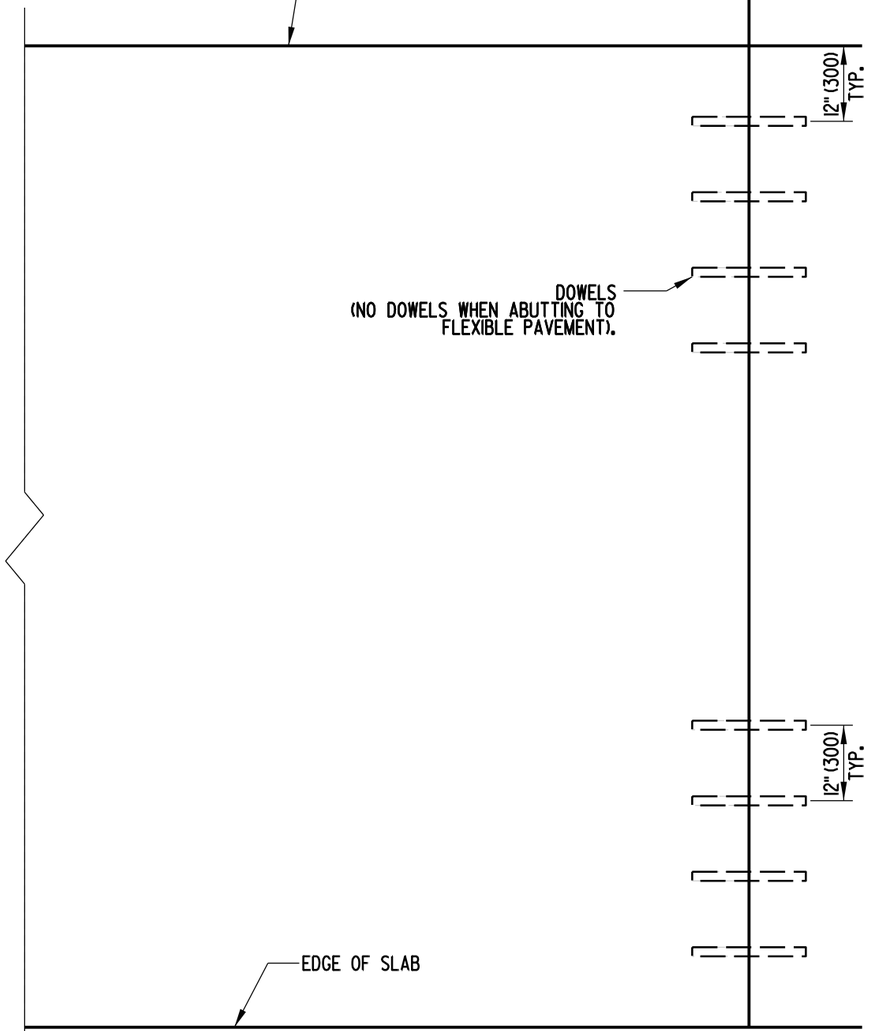
NOTES:

1). WHEN REPAIRING EXISTING TRANSVERSE JOINTS, THE PATCH SHALL EXTEND A MINIMUM OF 24" (600) THROUGH THE EXISTING JOINT, WHICH WILL RELOCATE THE JOINT.

2). PROPOSED LOCATIONS FOR TRANSVERSE JOINTS, WHEN NOT ALIGNED WITH THE FINAL EXPECTED TRANSVERSE JOINT LOCATIONS IN THE IMMEDIATELY ADJACENT LANES, SHALL BE OFFSET A MINIMUM OF 2' (600) FROM THE AFFORMENTIONED JOINTS.

3). THE LONGITUDINAL JOINT ALIGNMENT SHALL BE STRAIGHT AND CONTINUOUS THROUGH THE REPAIRED AREA.

SCALE : N.T.S.



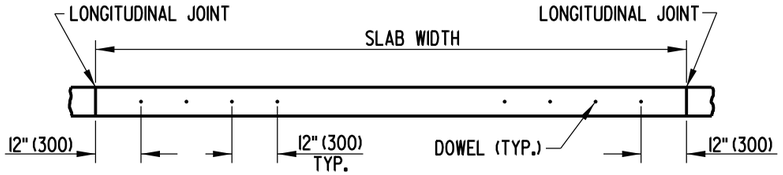
SLAB PLAN (WITH DOWEL AND TIE LOCATIONS)

FULL DEPTH PATCH

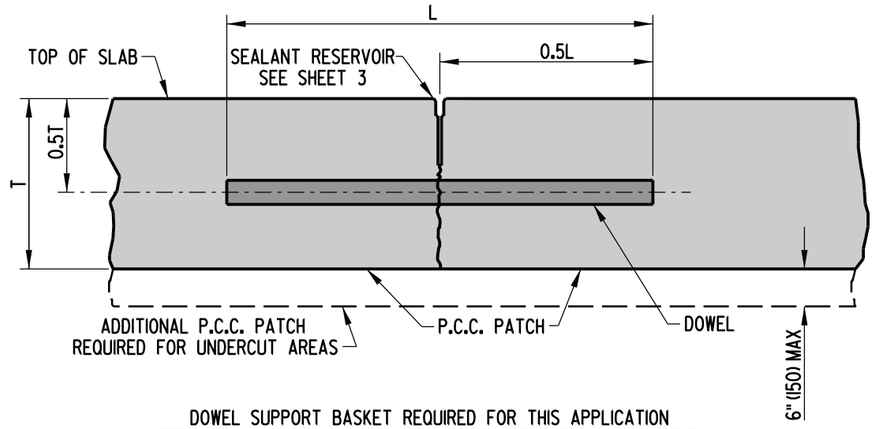
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT PATCHING			APPROVED CHIEF ENGINEER	DATE 11/18/08
	STANDARD NO. P-2 (2008)	SHT. 1	OF 5	RECOMMENDED DESIGN ENGINEER	DATE 11/17/08

11/14/2008

SCALE : N.T.S.



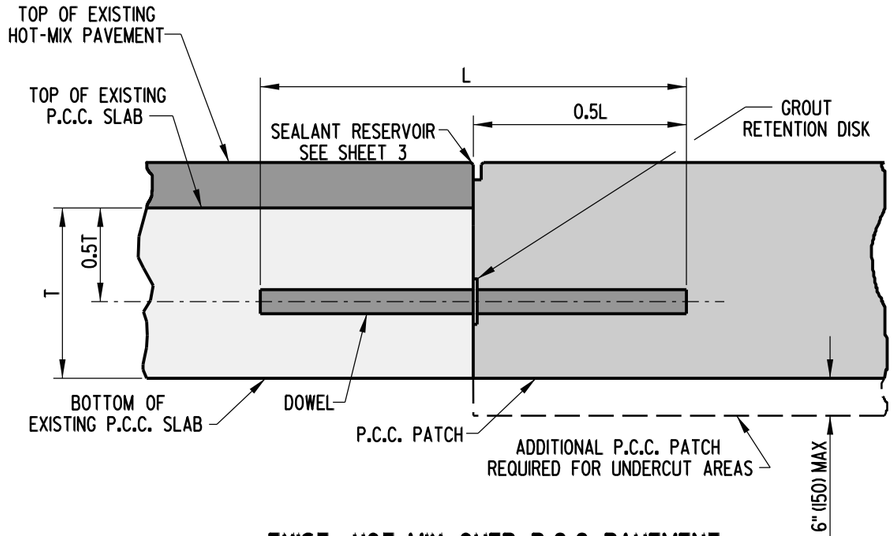
SECTION A-A



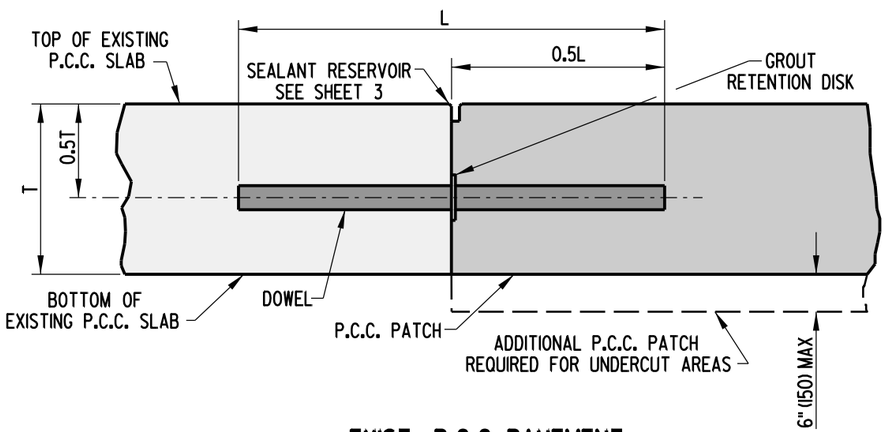
DOWEL SUPPORT BASKET REQUIRED FOR THIS APPLICATION
(REFER TO STANDARD CONSTRUCTION DETAIL FOR P.C.C. PAVEMENT.)

SECTION B-B

TRANSVERSE SAW-CUT USED FOR
JOINTS LOCATED WITHIN THE PATCH



EXIST. HOT-MIX OVER P.C.C. PAVEMENT



EXIST. P.C.C. PAVEMENT

SECTION C-C

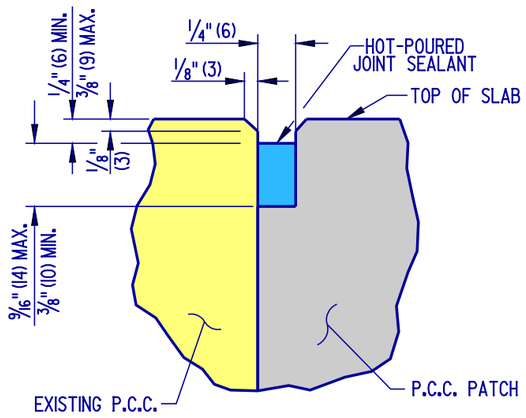
TRANSVERSE CONSTRUCTION JOINT USED ON
JOINTS BETWEEN EXISTING PAVEMENT AND PATCH

FULL DEPTH PATCH

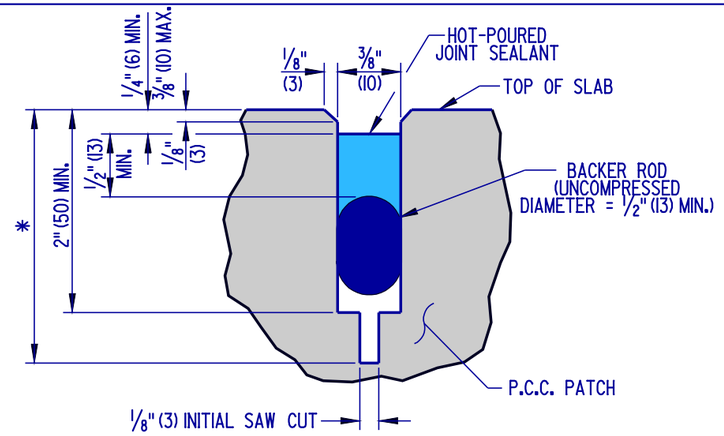
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT PATCHING		APPROVED CHIEF ENGINEER — DATE 11/18/08
	STANDARD NO. P-2 (2008)	SHT. 2 OF 5	RECOMMENDED DESIGN ENGINEER — DATE 11/17/08

11/14/2008

SCALE : N.T.S.

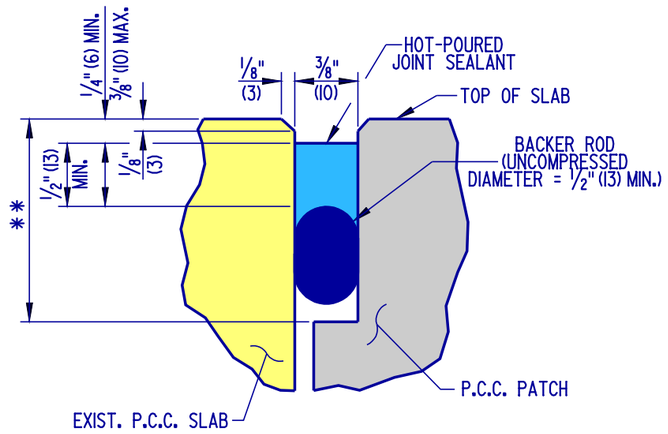


SEALANT DETAIL- LONGITUDINAL JOINT



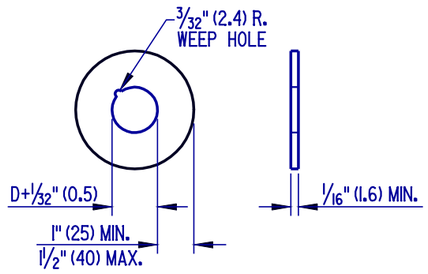
* - 0.3T (T ≤ 10" (250) P.C.C. PAVEMENT)
0.4T (T > 10" (250) P.C.C. PAVEMENT)

SEALANT DETAIL- TRANSVERSE SAW-CUT JOINT



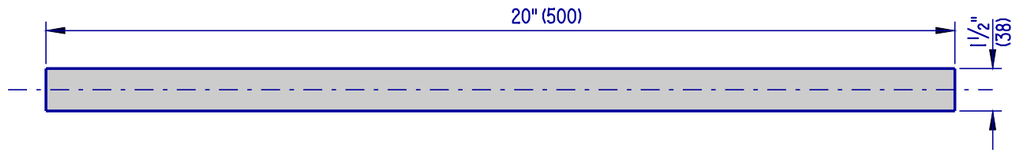
** - 2" (50) MIN. WITH BACKER ROD
5/8" (16) MIN. WITH BOND BREAKER TAPE

SEALANT DETAIL- TRANSVERSE CONSTRUCTION JOINT



D - DOWEL DIAMETER (INCLUDING PROTECTING COATINGS, IF ANY.)

GROUT RETENTION DISK



DOWEL BAR

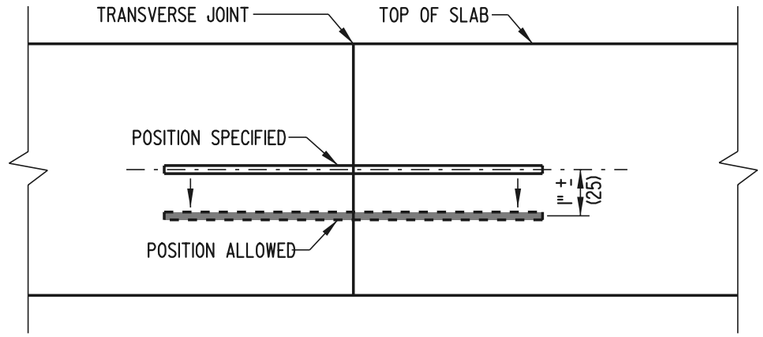
NOTES:
1). AS DIMENSIONED, THE WIDTH OF THE TRANSVERSE SEALANT RESERVOIR IS APPLICABLE WHEN THE TEMPERATURE OF THE PAVEMENT SURFACE IS BETWEEN 60°F (16°C) AND 80°F (27°C). WHEN THE TEMPERATURE IS BELOW 60°F (16°C), THE SEALANT RESERVOIR SHALL BE CUT 1/16" (2) WIDER. WHEN THE TEMPERATURE IS ABOVE 80°F (27°C), THE SEALANT RESERVOIR SHALL BE CUT 1/16" (2) NARROWER.
2). "T" REFERS TO THE EXISTING "AS-BUILT" SLAB THICKNESS.
3). TOLERANCE ON ALL JOINT SEALANT DETAIL DIMENSIONS SHOWN WITHOUT RANGES SHALL BE PLUSS1/16" (2), MINUS 0" (0).
4). THE TOP EDGES OF THE CONTACT SURFACES OF THE SEALANT MATERIAL ON BOTH SIDES OF THE JOINT RESERVOIR SHALL BE AT THE SAME ELEVATION.

FULL DEPTH PATCH

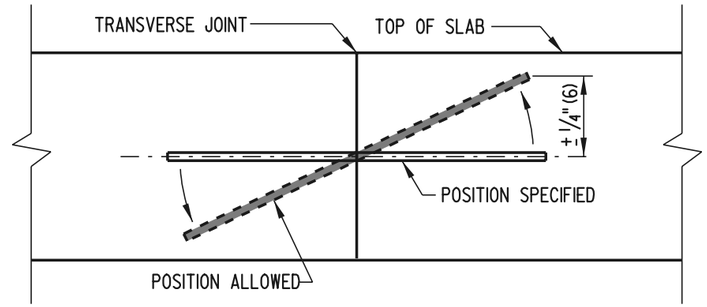
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT PATCHING	APPROVED Carolann Wicks (CHIEF ENGINEER) 1/10/05 (DATE)
	STANDARD NO. P-2 (2004) SHT. 3 OF 5	RECOMMENDED Dennis M. Office (DESIGN ENGINEER) 1/3/05 (DATE)

10/01/2004

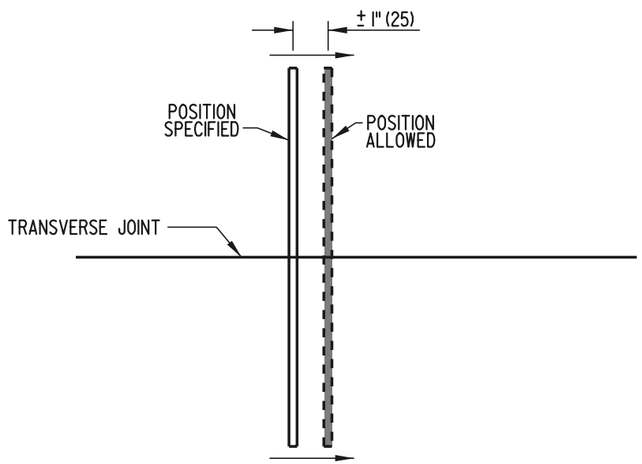
SCALE : N.T.S.



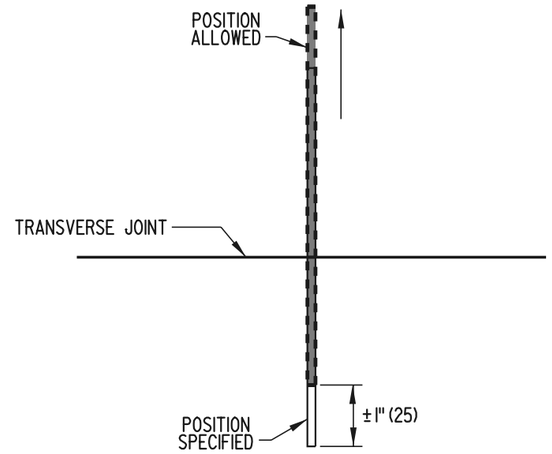
VERTICAL TRANSLATION



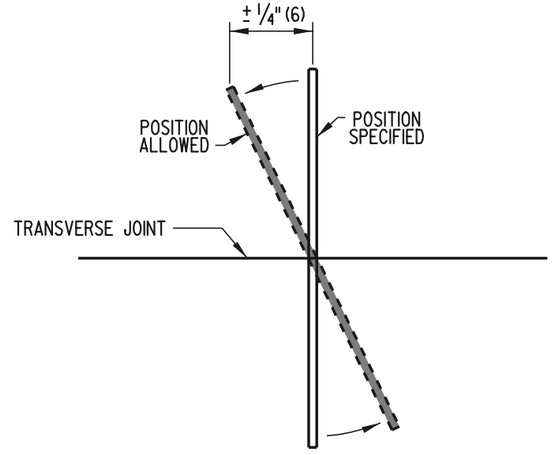
VERTICAL ROTATION



HORIZONTAL TRANSLATION



LONGITUDINAL TRANSLATION



HORIZONTAL ROTATION

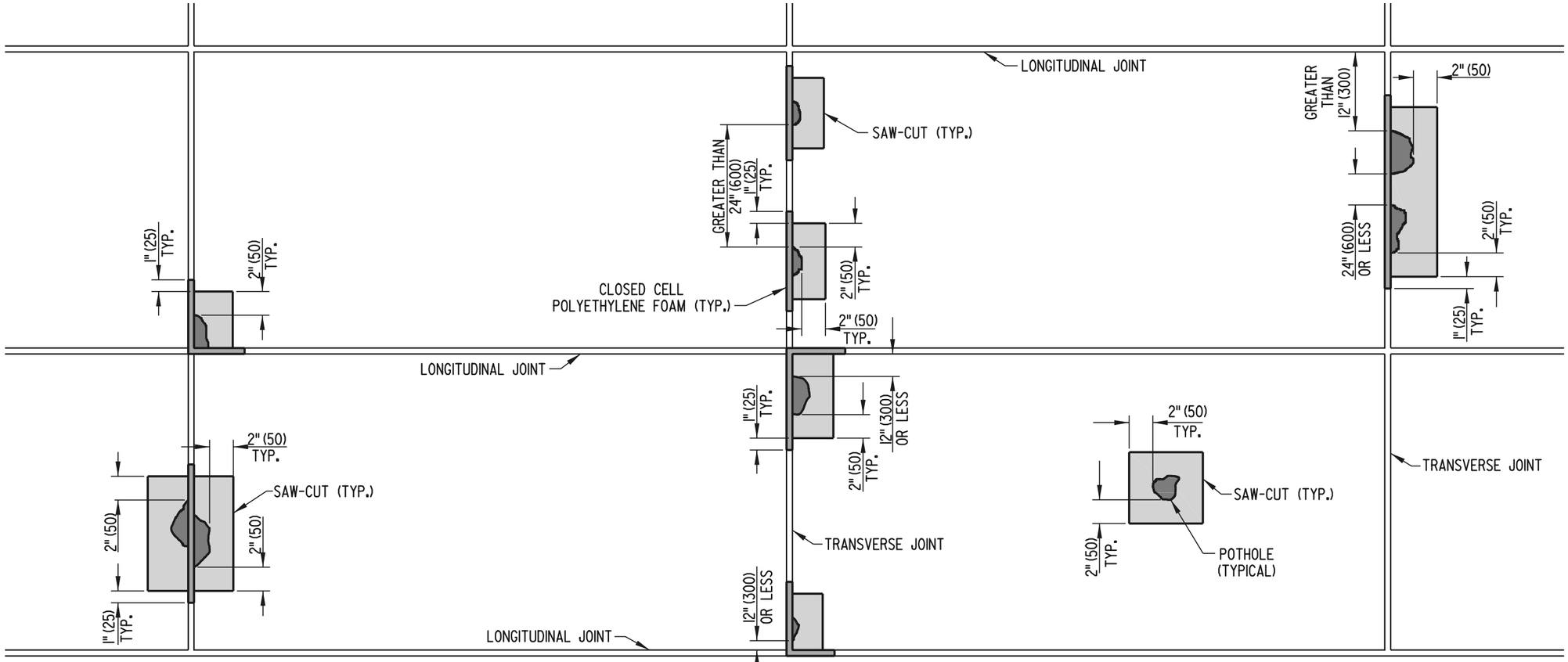
DOWEL & TIE BAR PLACEMENT TOLERANCES

FULL DEPTH PATCH

DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT PATCHING		APPROVED _____ CHIEF ENGINEER DATE 6/18/01
	STANDARD NO. P-2 (2001)	SHT. 4 OF 5	RECOMMENDED _____ DESIGN ENGINEER DATE 6/15/01

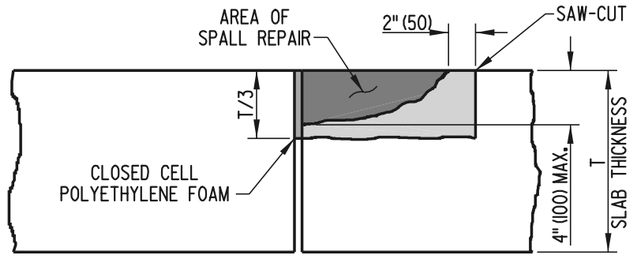
04/18/2001

SCALE : N.T.S.

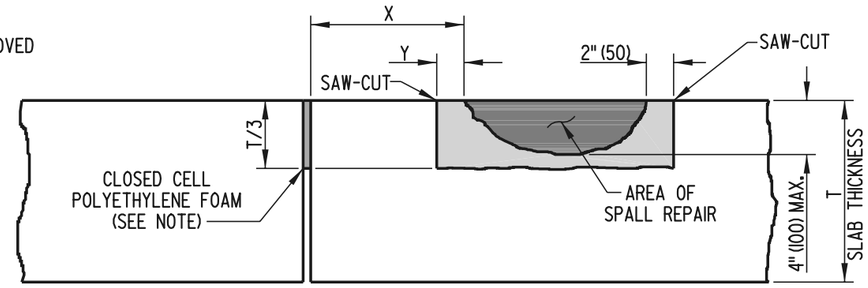


PLAN

NOTE: CLOSED CELL POLYETHYLENE FOAM SHALL BE THE SAME WIDTH AS THE JOINT AND 5" (125) IN DEPTH. AFTER THE CONCRETE IN THE REPAIR AREA HAS ACHIEVED THE SPECIFIED STRENGTH, THE FOAM SHALL BE REMOVED AND REPLACED WITH BACKER ROD AND HOT-POUR SEALANT MEETING ALL APPLICABLE STANDARD DETAILS AND SPECIFICATIONS.



SECTION WITH SPALL ADJACENT TO JOINT



SECTION WITH SPALL NOT ADJACENT TO JOINT

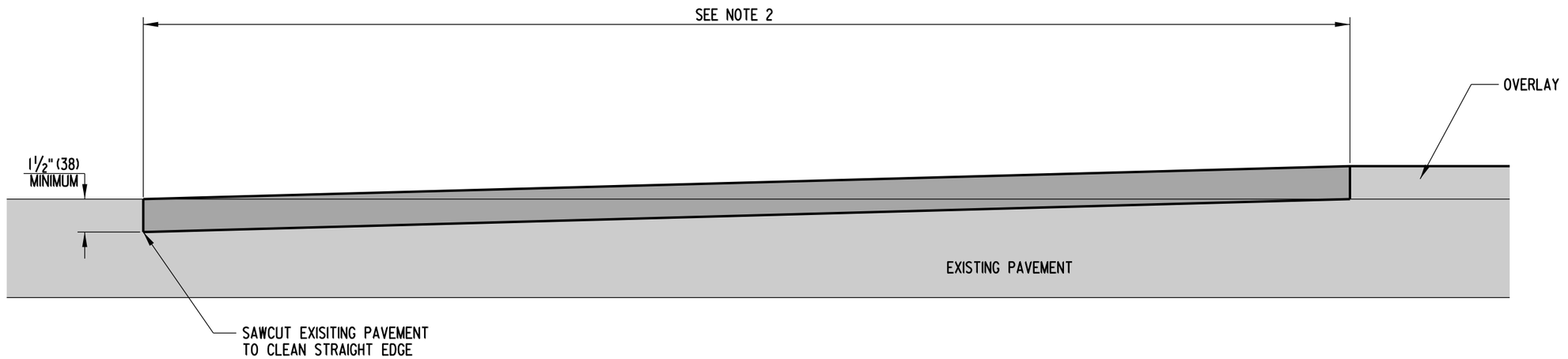
NOTE: WHEN X > 12" (300), THEN Y=1" (25) AND POLYETHYLENE FOAM IS NOT USED.
WHEN X ≤ 12" (300), THEN Y=X AND POLYETHYLENE FOAM IS USED.

PARTIAL DEPTH PATCH

DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. PAVEMENT PATCHING		APPROVED Lynne M. Hastings CHIEF ENGINEER DATE 6/18/01
	STANDARD NO. P-2 (2001)	SHT. 5 OF 5	RECOMMENDED Michael A. Pepe DESIGN ENGINEER DATE 6/15/01

05/22/2001

SCALE : N.T.S.



NOTES:

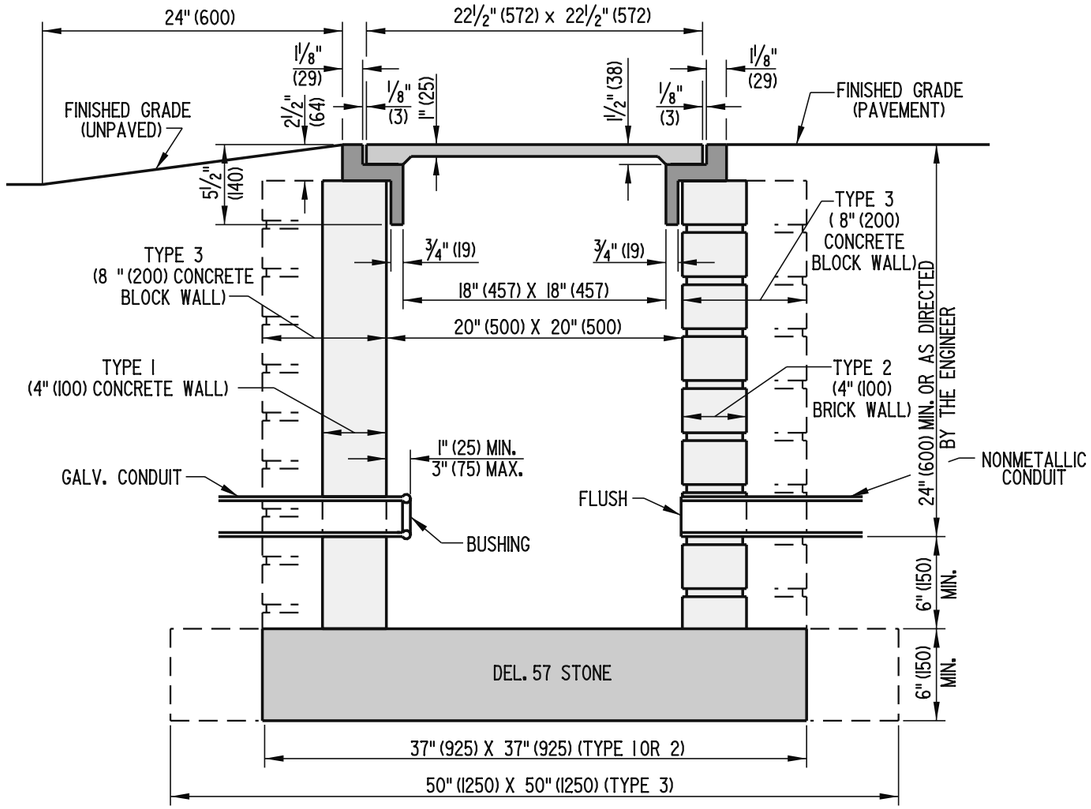
1). THE PROFILE OF THE OVERLAY PAVING SHALL BE ADJUSTED TO ASSURE A SMOOTH TRANSITION THROUGH THE BUTT JOINT. THE REMOVAL AND CLEANUP OF THE HOT MIX RESIDUE WEDGE LEFT FROM THE MILLING OPERATIONS ALONG CURB LINES, ADJACENT TO SPEED HUMPS, ACROSS INTERSECTING STREETS, AND AT THE BEGINNING AND ENDING POINTS OF THE BUTT JOINT, SHALL BE INCIDENTAL TO THE BUTT JOINT ITEM.

2). THE LENGTH OF THE BUTT JOINT SHALL BE EQUAL TO 30' (90m) FOR EVERY 1" (25) OF OVERLAY DEPTH.

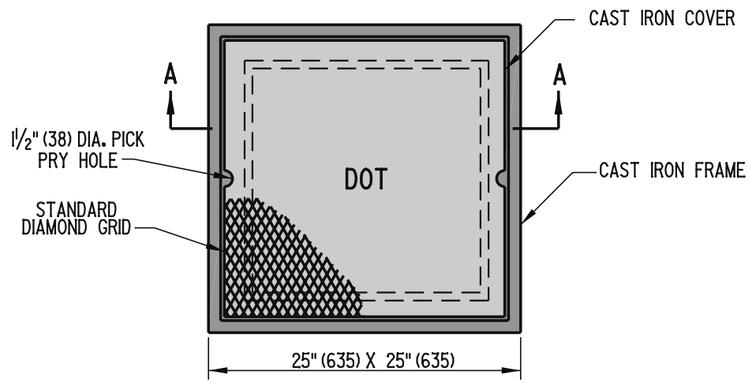
DELAWARE DEPARTMENT OF TRANSPORTATION	BUTT JOINTS	APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/19/2010 (DATE)
	STANDARD NO. P-3 (2009) SHT. 1 OF 1	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 01/14/2010 (DATE)

01/08/2010

SCALE : N.T.S.



SECTION A-A



PLAN VIEW

NOTES: 1). TYPE 1 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" (125) DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.

2). TYPE 2 AND TYPE 3 CONDUIT JUNCTION WELLS SHALL BE BRICK AND WILL CONFORM TO STANDARD SPECIFICATIONS FOR BRICK MASONRY. JOINTS SHALL BE CONCAVE TYPE. TYPE 2 WALLS WILL BE A NOMINAL 4" (100) THICK. TYPE 3 WALL WILL BE A NOMINAL 8" (200) THICK.

3). TYPE 2 AND TYPE 3 CONDUIT JUNCTION WELLS SHALL NOT BE PLACED UNDER ANY TYPE OF PAVEMENT.

4). ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM CONDUIT JUNCTION WELL.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CONDUIT JUNCTION WELL, TYPES 1, 2, AND 3

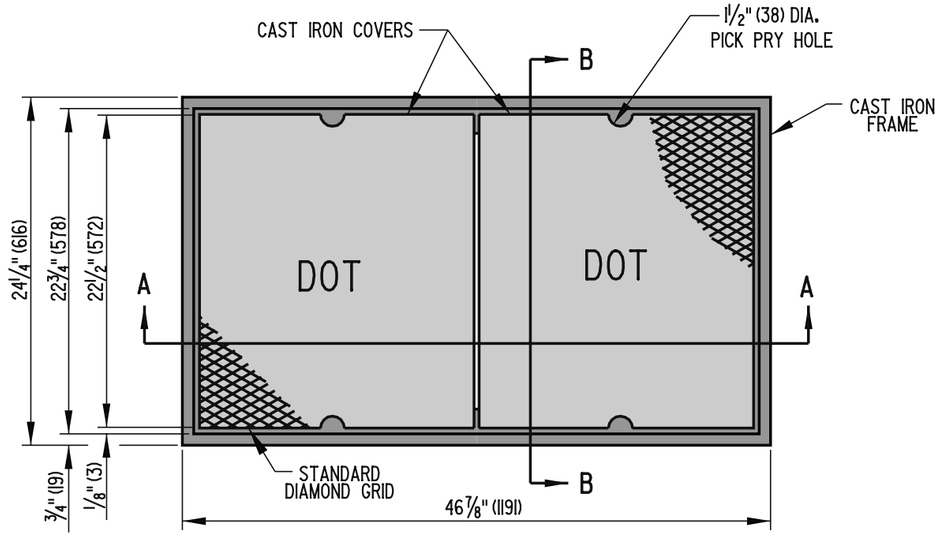
STANDARD NO. T-1 (2005) | SHT. 1 OF 1

APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE

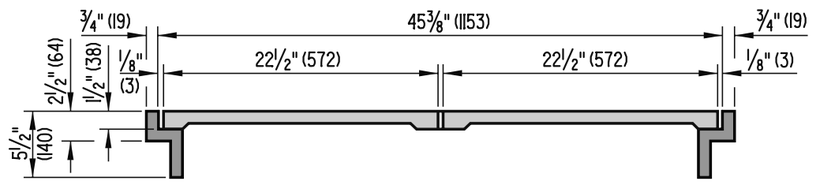
RECOMMENDED James M. Ojalvo DESIGN ENGINEER 11/29/05 DATE

09/08/2005

SCALE : N.T.S.



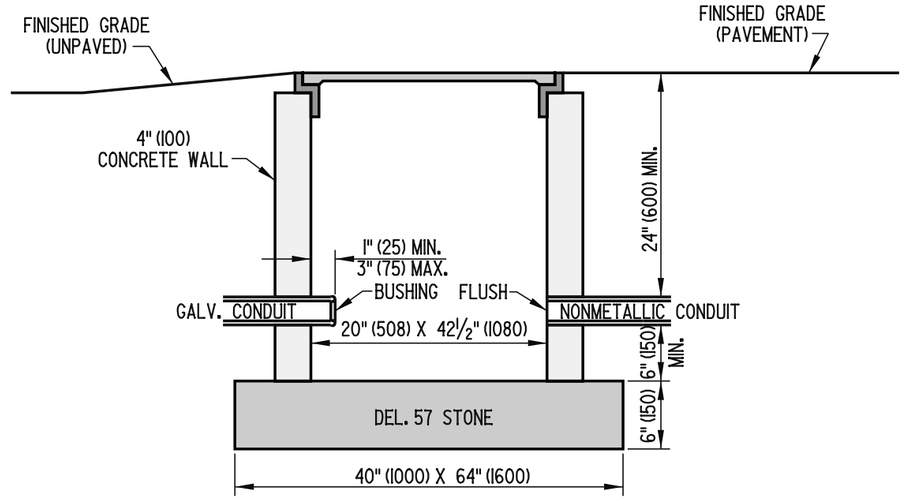
PLAN VIEW



SECTION A-A

NOTES: 1). TYPE 4 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" (125) DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.

2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM CONDUIT JUNCTION WELL.

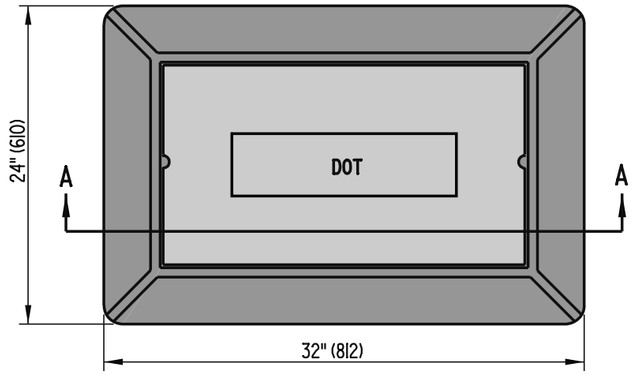


SECTION B-B

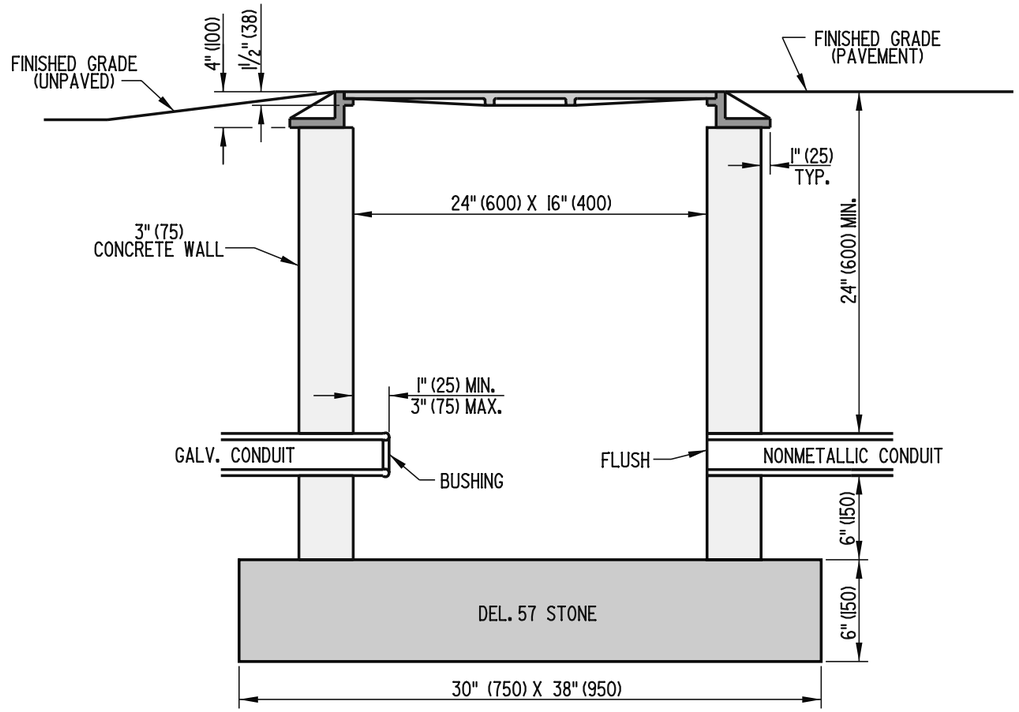
DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 4		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-2 (2005)	SHT. 1 OF 1	RECOMMENDED James M. Ojeda DESIGN ENGINEER 11/29/05 DATE

09/08/2005

SCALE : N.T.S.



PLAN VIEW



SECTION A-A

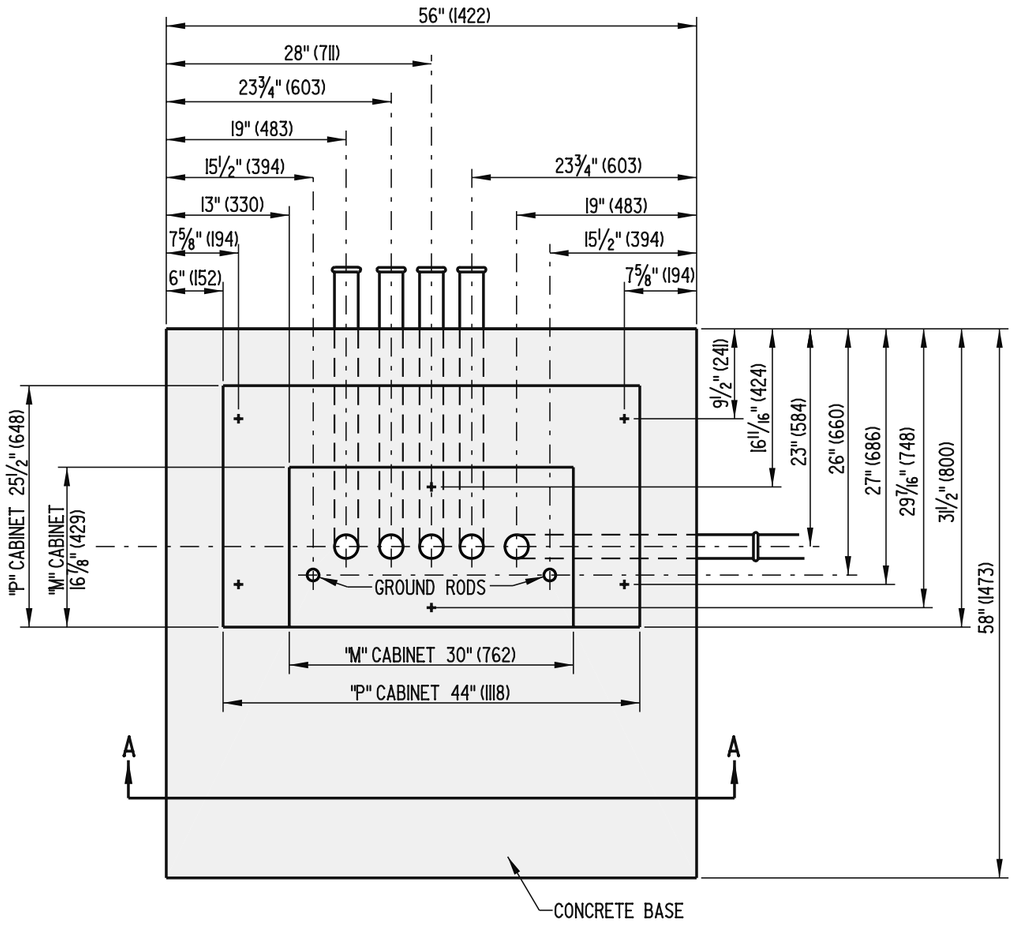
NOTES: 1). TYPE 5 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" (125) DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.

2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM CONDUIT JUNCTION WELL.

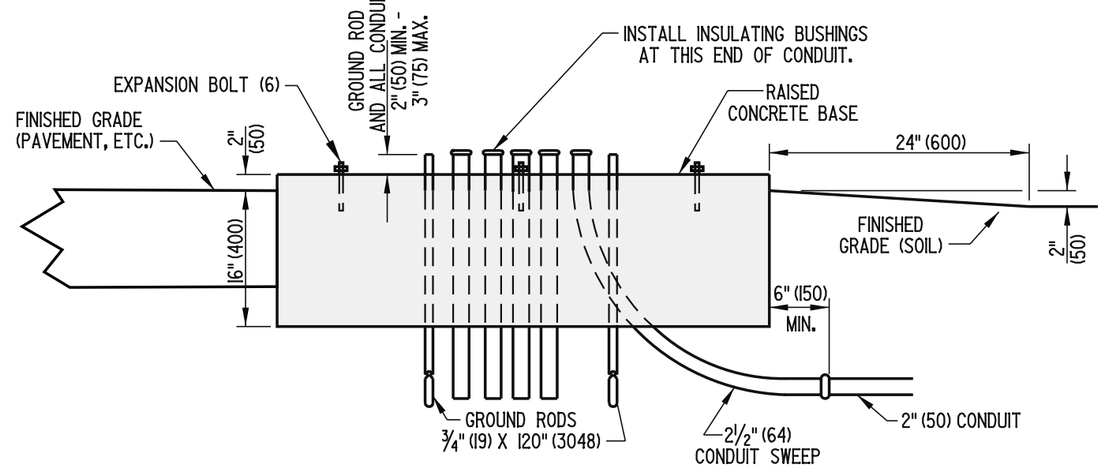
DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 5		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-3 (2005)	SHT. 1 OF 1	RECOMMENDED James M. Ojdana DESIGN ENGINEER 11/29/05 DATE

09/08/2005

SCALE : N.T.S.



PLAN VIEW



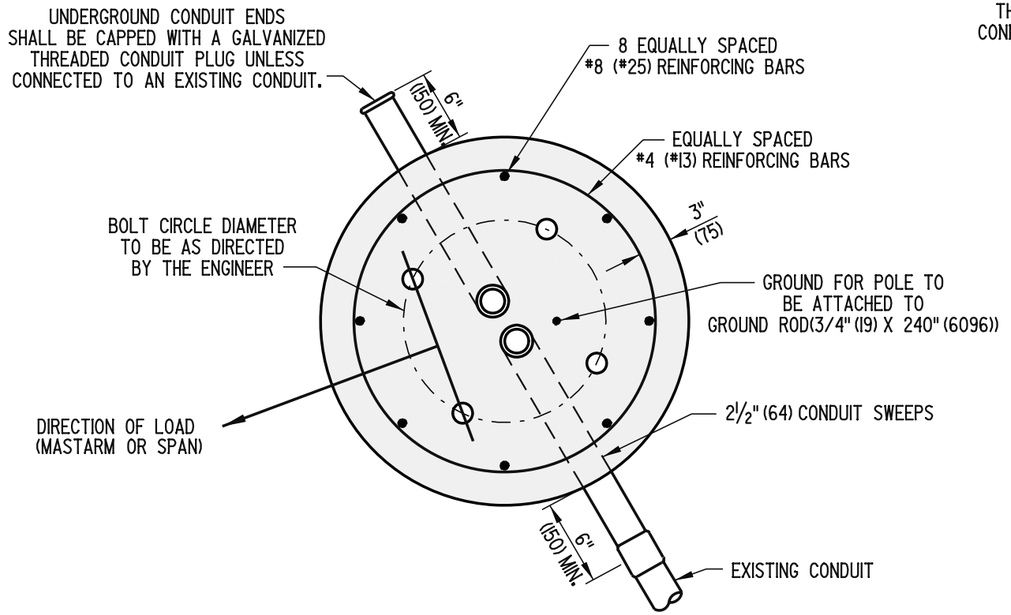
SECTION A-A

CONCRETE CABINET BASE

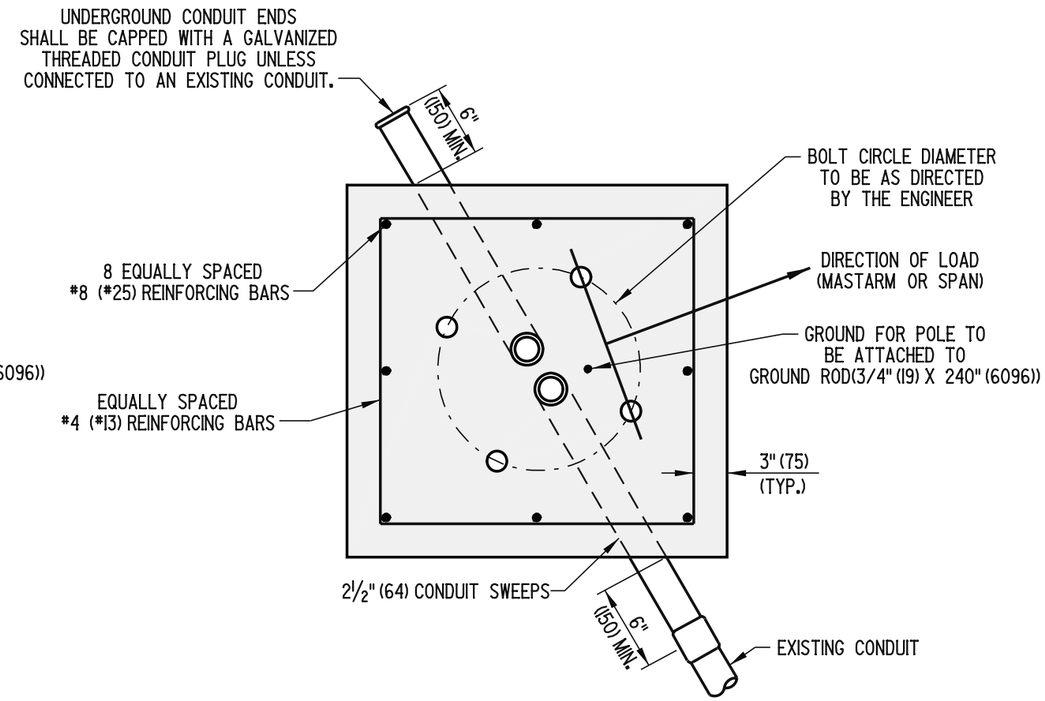
DELAWARE DEPARTMENT OF TRANSPORTATION	CABINET BASES (TYPES 'M' & 'P')		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-4 (2005)	SHT. 1 OF 1	RECOMMENDED Jennifer M. O'Mara DESIGN ENGINEER 11/29/05 DATE

09/09/2005

SCALE : N.T.S.



ROUND BASE



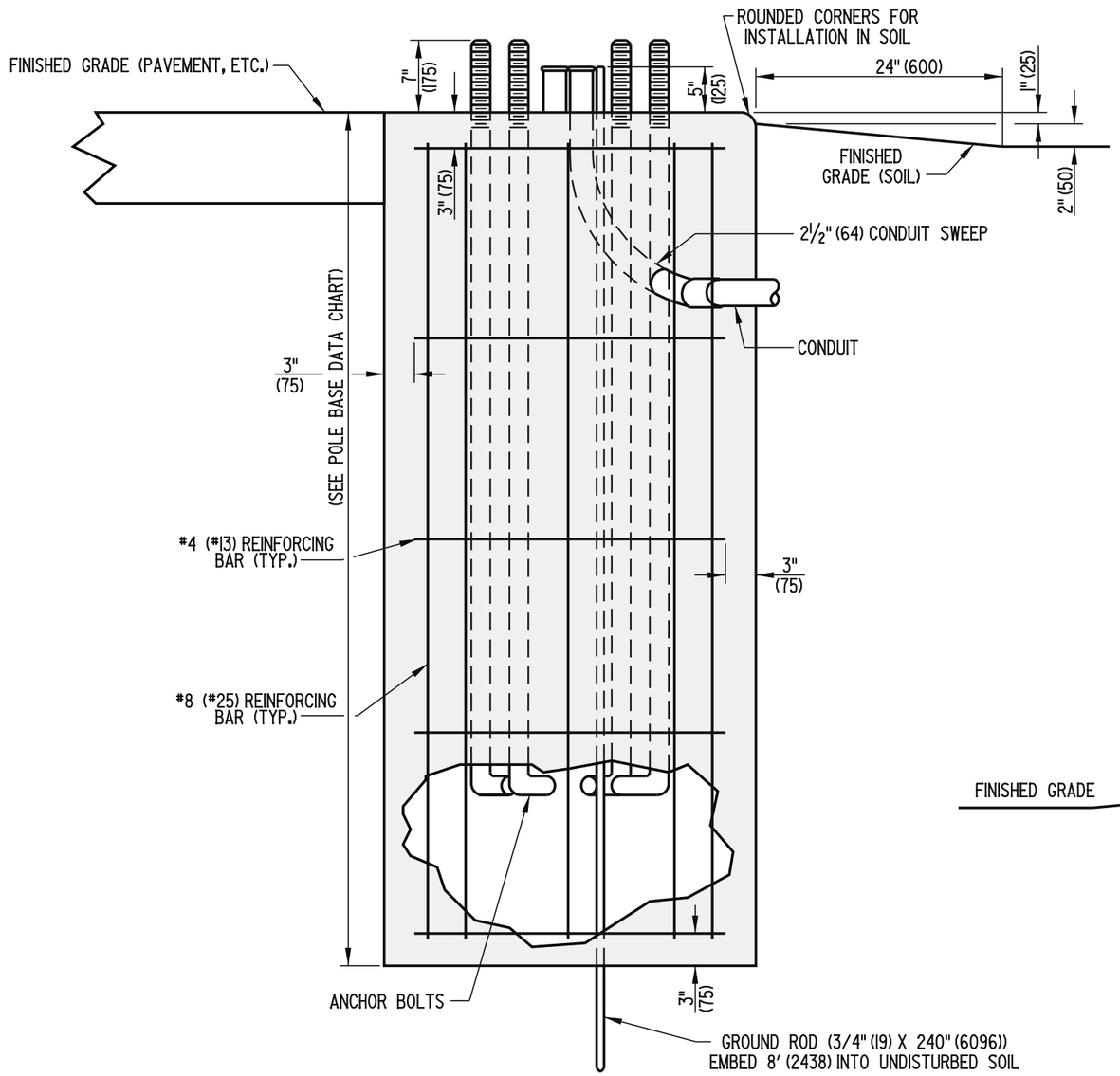
SQUARE BASE

NOTE: BASE DEPENDENT ON POLE AND EQUIPMENT TO BE ATTACHED.

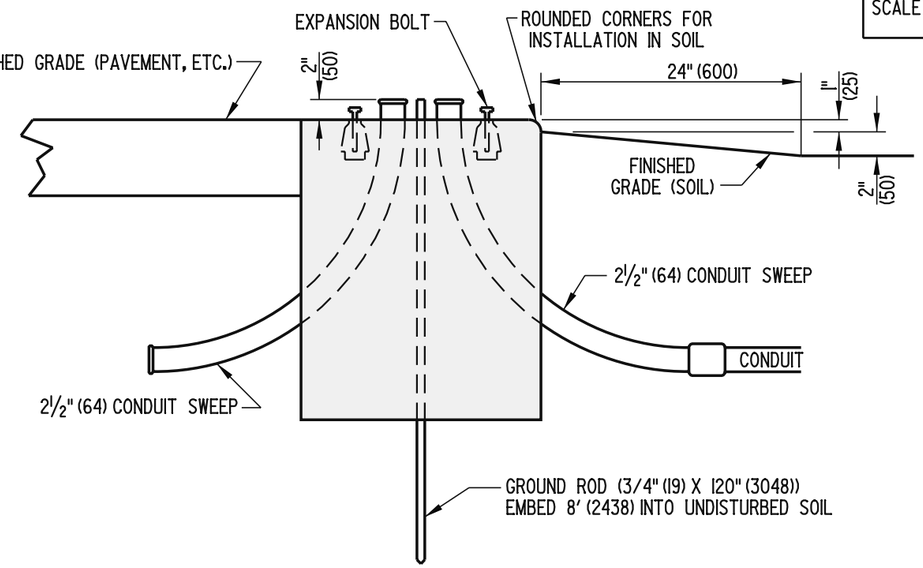
DELAWARE DEPARTMENT OF TRANSPORTATION	POLE BASES		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-5 (2005)	SHT. 1 OF 3	RECOMMENDED James M. O'Neill DESIGN ENGINEER 11/29/05 DATE

09/08/2005

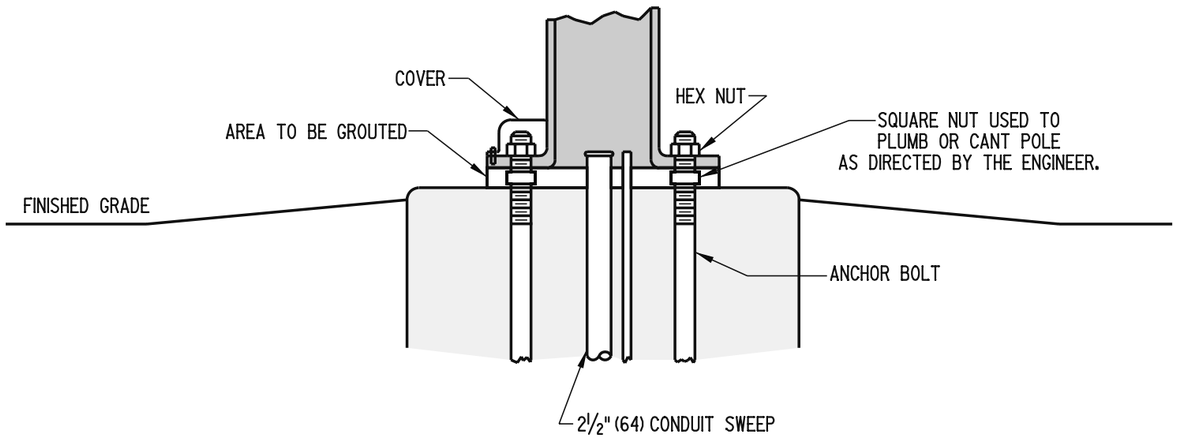
SCALE : N.T.S.



TYPICAL SECTION (BASES 1,2,2A,2B,3,3A,3B, AND 7)



TYPICAL SECTION (BASE 4)



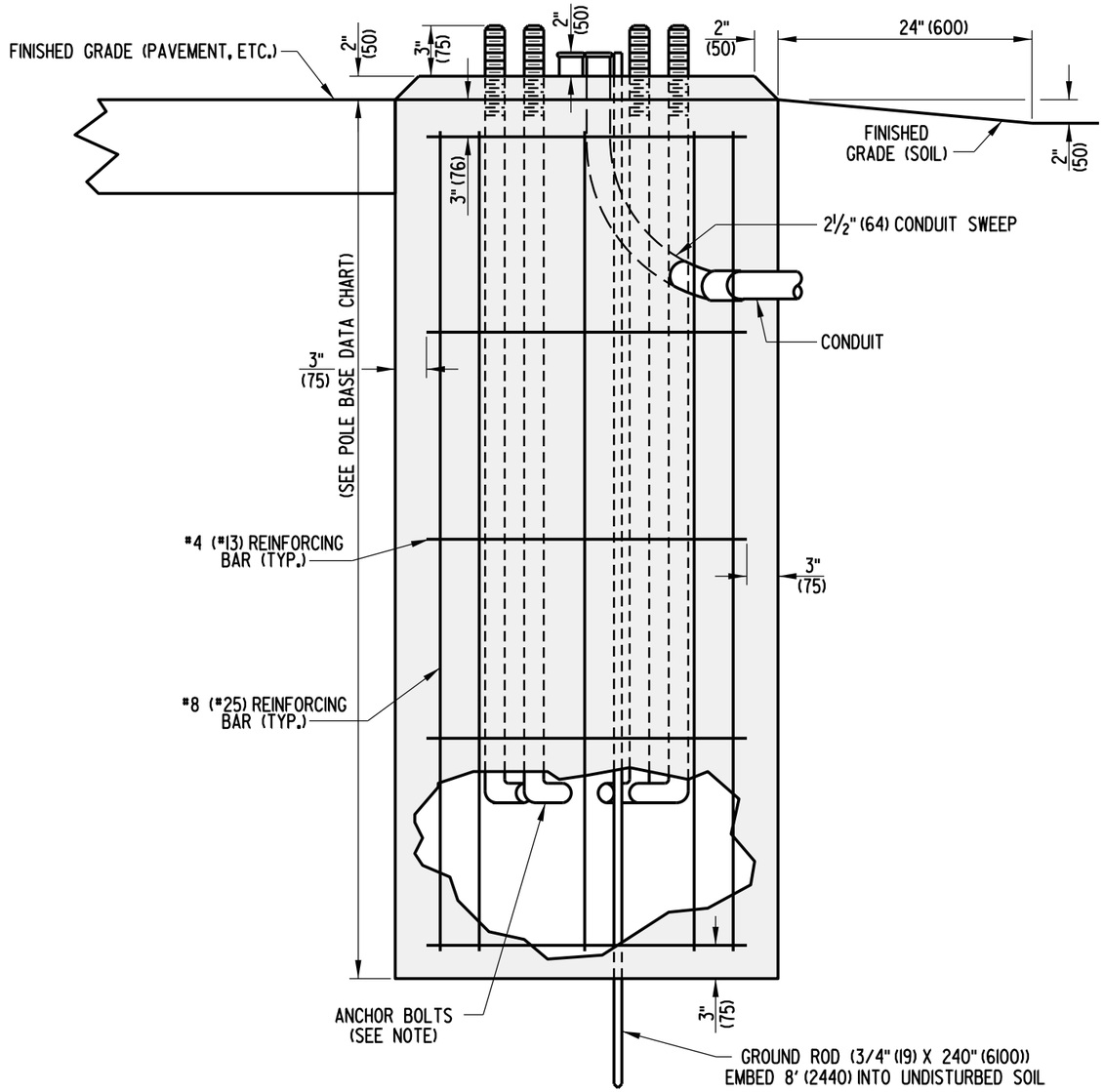
TYPICAL INSTALLATION (BASES 1,2,2A,2B,3,3A,3B,4, AND 7)

NOTES:
1.) PLACE 2 EACH 6" (150) LONG x ½" (13) DIA. P.V.C., SCHEDULE 40 (TYP) VENTS IN THE GROUT AS DIRECTED IN THE FIELD BY ENGINEER.
2.) SEE POLE BASE DATA CHART FOR POLE BASE DIMENSIONS.

DELAWARE DEPARTMENT OF TRANSPORTATION	POLE BASES		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-5 (2005)	SHT. 2 OF 3	RECOMMENDED James M. Ojeda DESIGN ENGINEER 11/29/05 DATE

09/08/2005

SCALE : N.T.S.



TYPICAL SECTION (BASES 5 AND 6)

NOTE:
SEE SPECIFICATIONS AND DETAILS FROM CURRENT PURCHASING CONTRACT FOR ANCHOR BOLT DIMENSIONS.

POLE BASE DATA CHART

POLE BASE TYPE *	DIAMETER	DEPTH *	*4 (*13) HORIZONTAL REINFORCING BARS	*8 (*25) VERTICAL REINFORCING BARS
1	36" (915)	7' (2150)	5	8
2	36" (915)	10' (3050)	6	8
2A	48" (1220)	8' (2450)	5	8
2B	60" (1525)	7' (2150)	5	8
3	48" (1220)	10' (3050)	6	8
3A	60" (1525)	9' (2750)	6	8
3B	72" (1830)	7' (2150)	5	8
4	24" (610)	2'-4" (725)	NONE	NONE
5	36" (915)	4' (1225)	NONE	NONE
6	24" (610)	6' (1850)	4	8
7	48" (1220)	13'-4" (4000)	7	8

* - ADDITIONAL DEPTH FOR POLE BASE EXTENSION, IF REQUIRED, TO BE DETERMINED BY TRAFFIC ENGINEERING AND MANAGEMENT (TEAM) FIELD REPRESENTATIVE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

POLE BASES

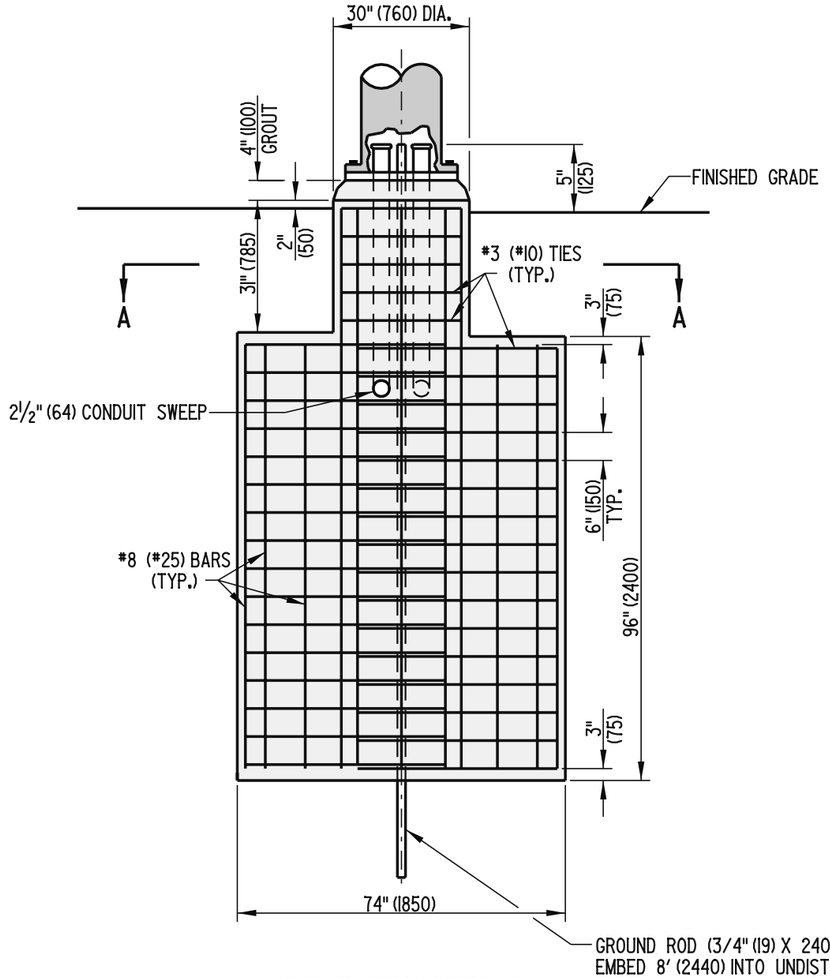
STANDARD NO. T-5 (2008) | SHT. 3 OF 3

APPROVED _____ CHIEF ENGINEER DATE 11/18/08

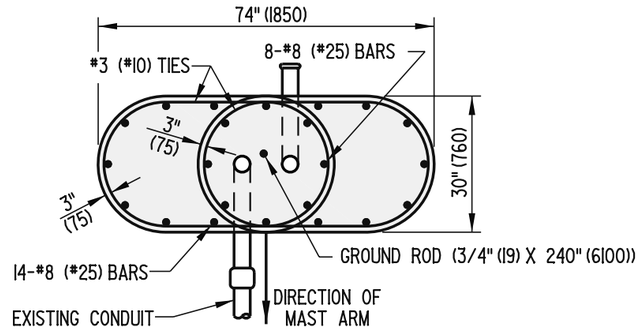
RECOMMENDED _____ DESIGN ENGINEER DATE 11/17/08

07/30/2008

SCALE : N.T.S.



FOUNDATION DETAILS



SECTION A-A

NOTES:

1. UNDERGROUND CONDUIT ENDS SHALL BE CAPPED WITH A GALVANIZED THREADED CONDUIT PLUG UNLESS CONNECTED TO AN EXISTING CONDUIT.

2. PLACE 2 EACH 6" (150) x ½" (13) P.V.C., SCHEDULE 40 (TYP) VENTS IN THE GROUT AS DIRECTED IN THE FIELD BY THE ENGINEER.

DELAWARE
DEPARTMENT OF TRANSPORTATION

SPECIAL POLE BASE

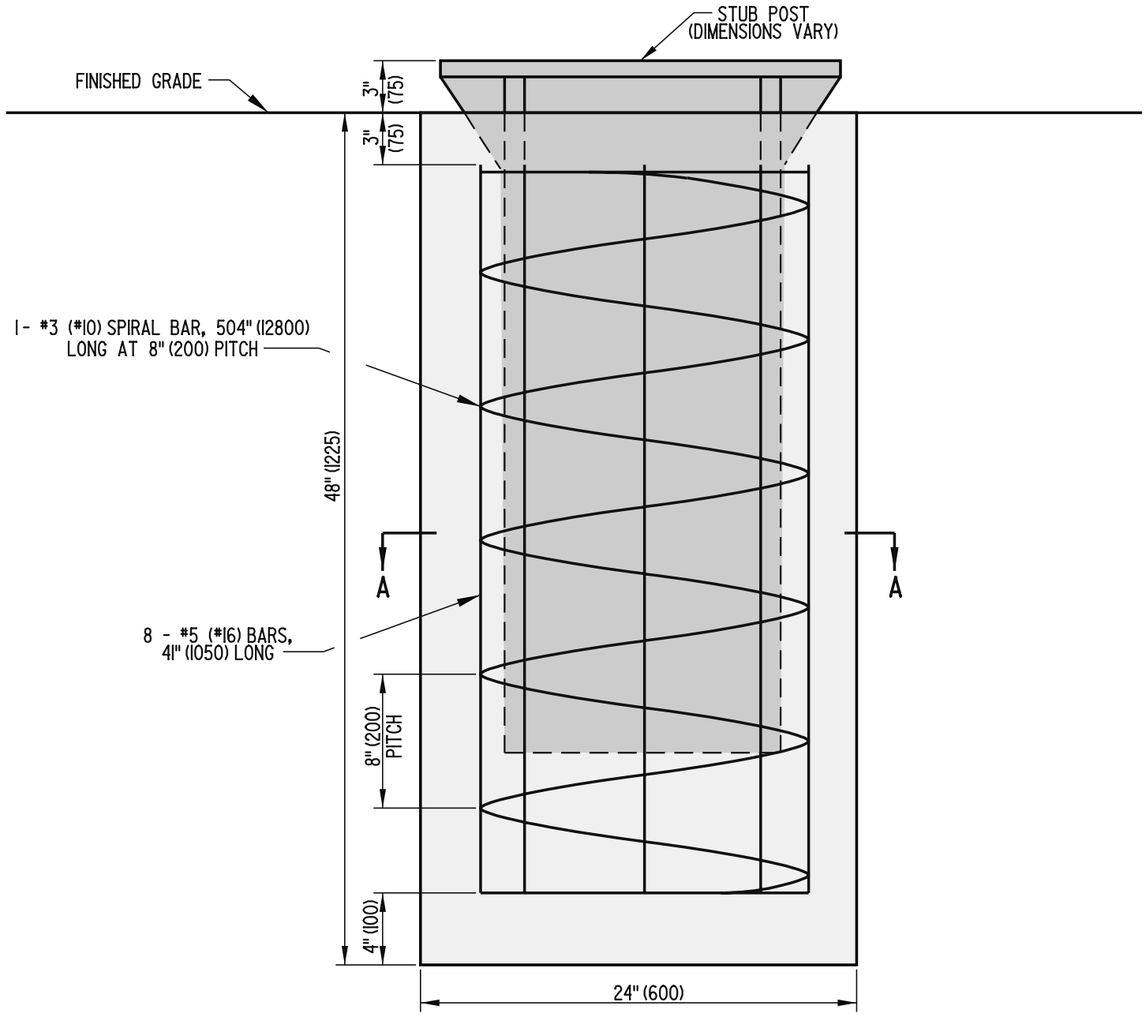
STANDARD NO. T-6 (2005) | SHT. 1 OF 1

APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE

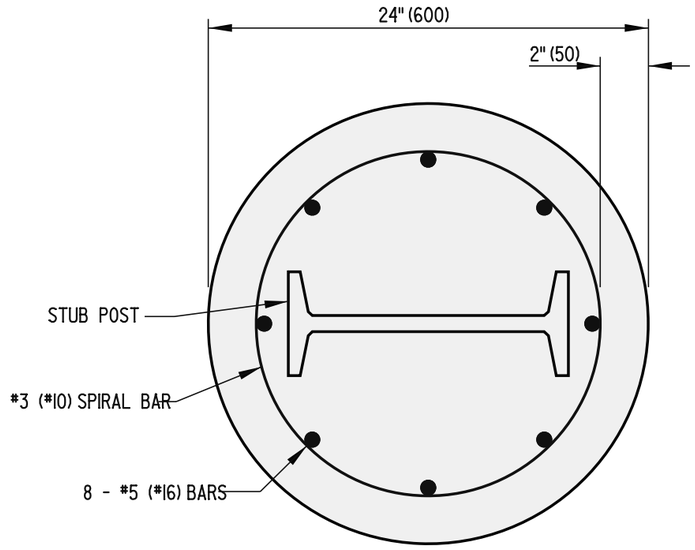
RECOMMENDED James M. Ojeda DESIGN ENGINEER 11/29/05 DATE

09/09/2005

SCALE : N.T.S.



NOTES: 1). STUB POST TO BE SUPPLIED BY THE DEPARTMENTS TRAFFIC, ENGINEERING, AND MANAGEMENT SECTION.



SECTION A-A

DELAWARE DEPARTMENT OF TRANSPORTATION	SIGN FOUNDATION		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-7 (2005)	SHT. 1 OF 1	RECOMMENDED James M. O'Neill DESIGN ENGINEER 11/29/05 DATE

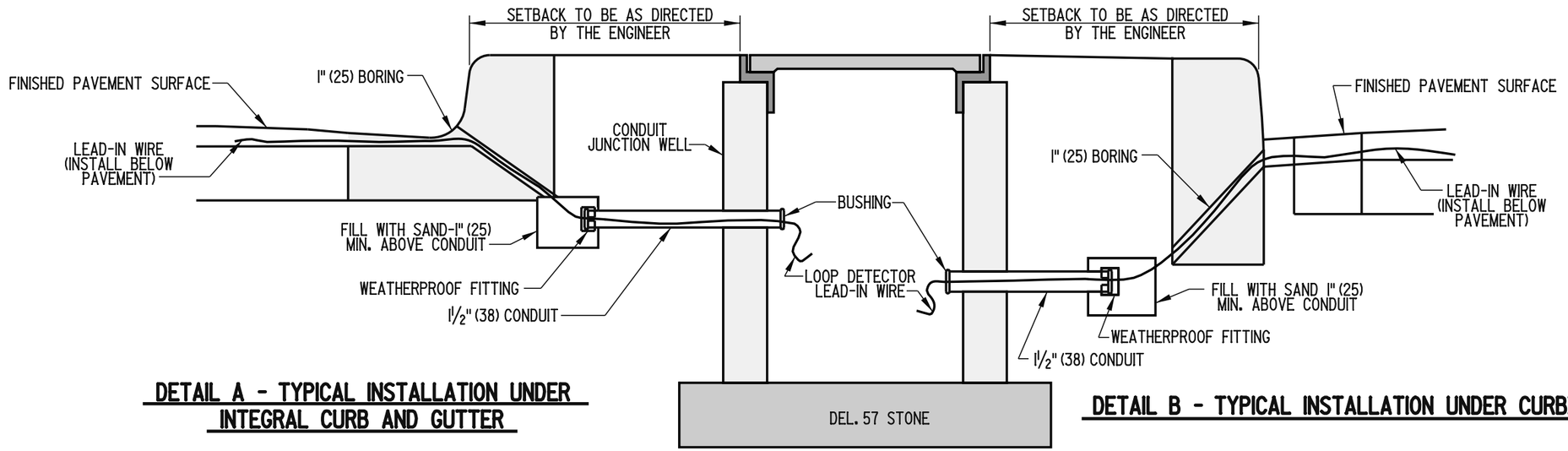
09/09/2005

SCALE : N.T.S.

NOTES: 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE CONDUIT AGAINST ANY POSSIBLE DAMAGE IN PAVING OPERATIONS.

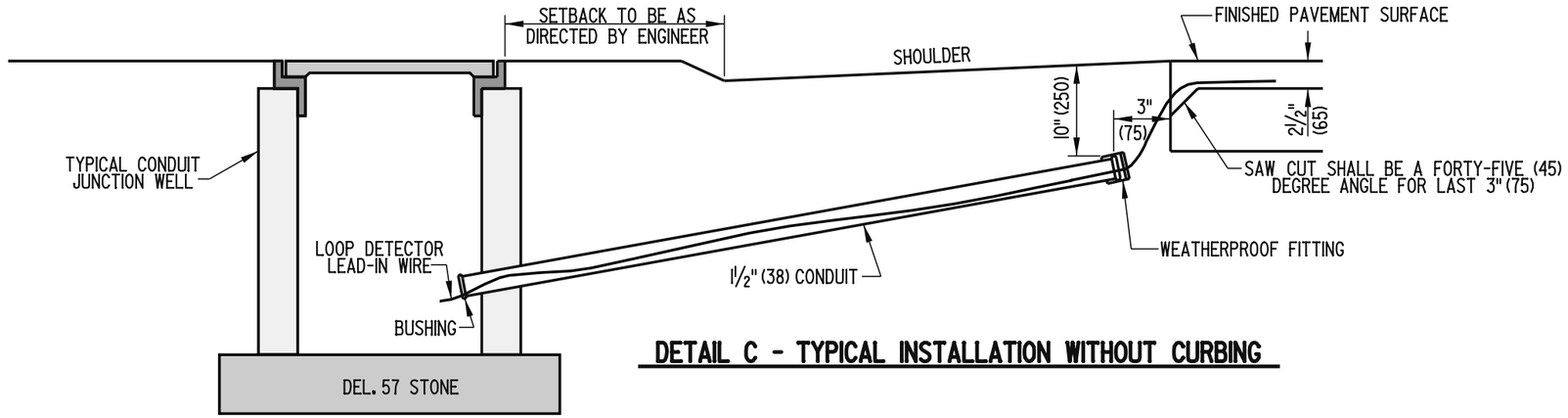
2. THE WEATHERPROOF FITTING SHALL CONSIST OF A GALVANIZED 1½" (38) COUPLING CONTAINING A STEEL THREADED REDUCING BUSHING (1½" (38) TO ¾" (19)) AND A ¾" (19) WATERTIGHT CONNECTOR FOR SERVICE ENTRANCE CABLE.

3. THE LEAD-IN WIRE SHALL BE RUN THROUGH THE RUBBER OF THE WEATHERPROOF FITTING.



DETAIL A - TYPICAL INSTALLATION UNDER INTEGRAL CURB AND GUTTER

DETAIL B - TYPICAL INSTALLATION UNDER CURBING

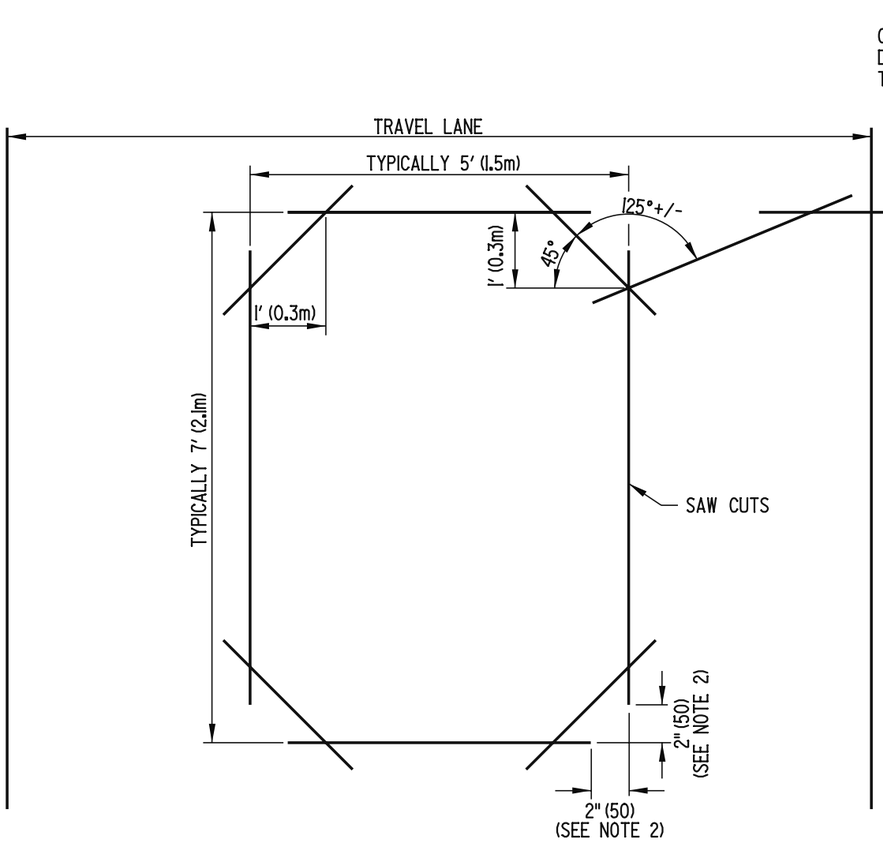


DETAIL C - TYPICAL INSTALLATION WITHOUT CURBING

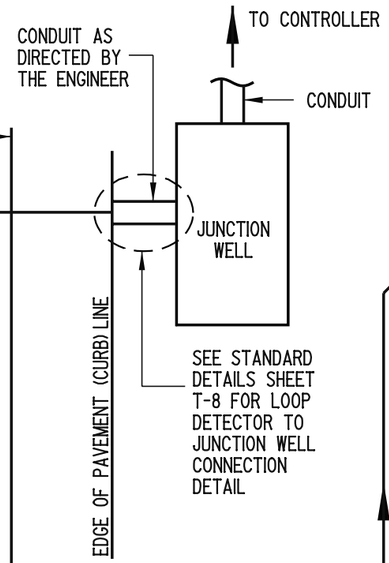
DELAWARE DEPARTMENT OF TRANSPORTATION	LOOP DETECTOR TO CONDUIT JUNCTION WELL CONNECTION		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-8 (2005)	SHT. 1 OF 1	RECOMMENDED James M. O'Neill DESIGN ENGINEER 11/29/05 DATE

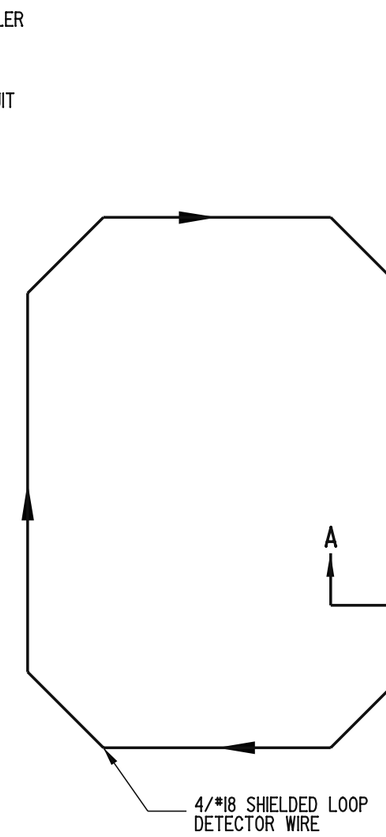
09/09/2005

SCALE : N.T.S.



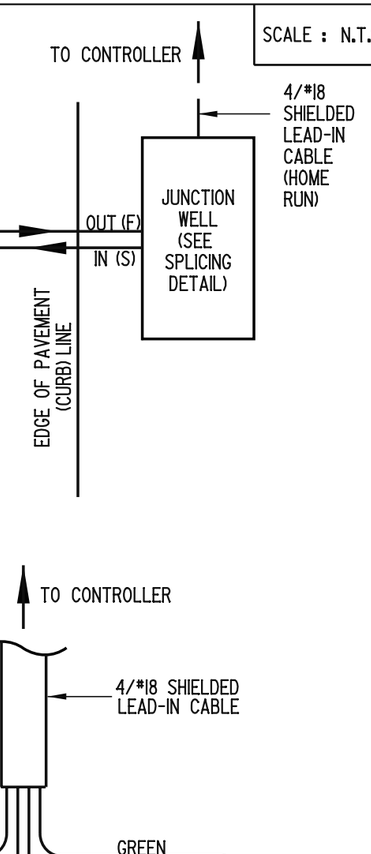
WIRE SLOT CONSTRUCTION





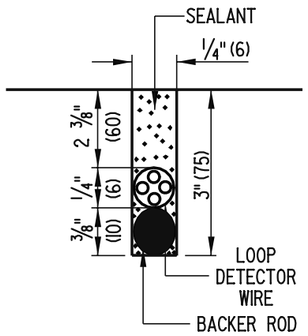
DETAILS FOR INSTALLING LOOP DETECTOR WIRE

(SINGLE WRAP)

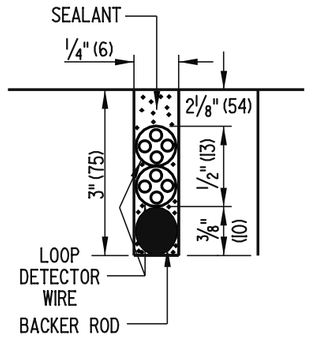


NOTES:

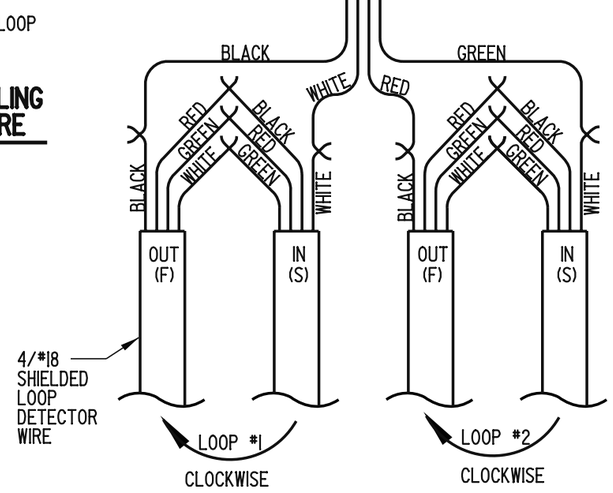
1). SAW CUTS FOR WIRE SLOT CONSTRUCTION SHALL BE EXTENDED BEYOND THE CORNERS SO THAT THE SLOT IS FULL DEPTH AT TURN POINTS. A FORTY-FIVE (45) DEGREE ANGLE SHALL BE CUT 12" (300) BACK FROM THE POINT OF THE EXTENDED CORNER.
2). THE LONGITUDINAL / TRANSVERSE CUT SHALL BE STOPPED APPROXIMATELY 2" (50) FROM THE CORNER TO PREVENT THE TRIANGULAR PORTION OF THE PAVEMENT FROM BREAKING.
3). A MAXIMUM OF TWO LOOP DETECTORS CAN BE SPLICED TO ONE LEAD-IN CABLE, THE DETAIL ILLUSTRATES THE METHOD OF SPLICING TWO LOOP DETECTORS (LOOP #1 AND LOOP #2) TO A LEAD-IN CABLE.
4). LOOP DETECTOR SHALL BE CENTERED IN TRAVEL LANE.



SECTION A - A



SECTION B - B



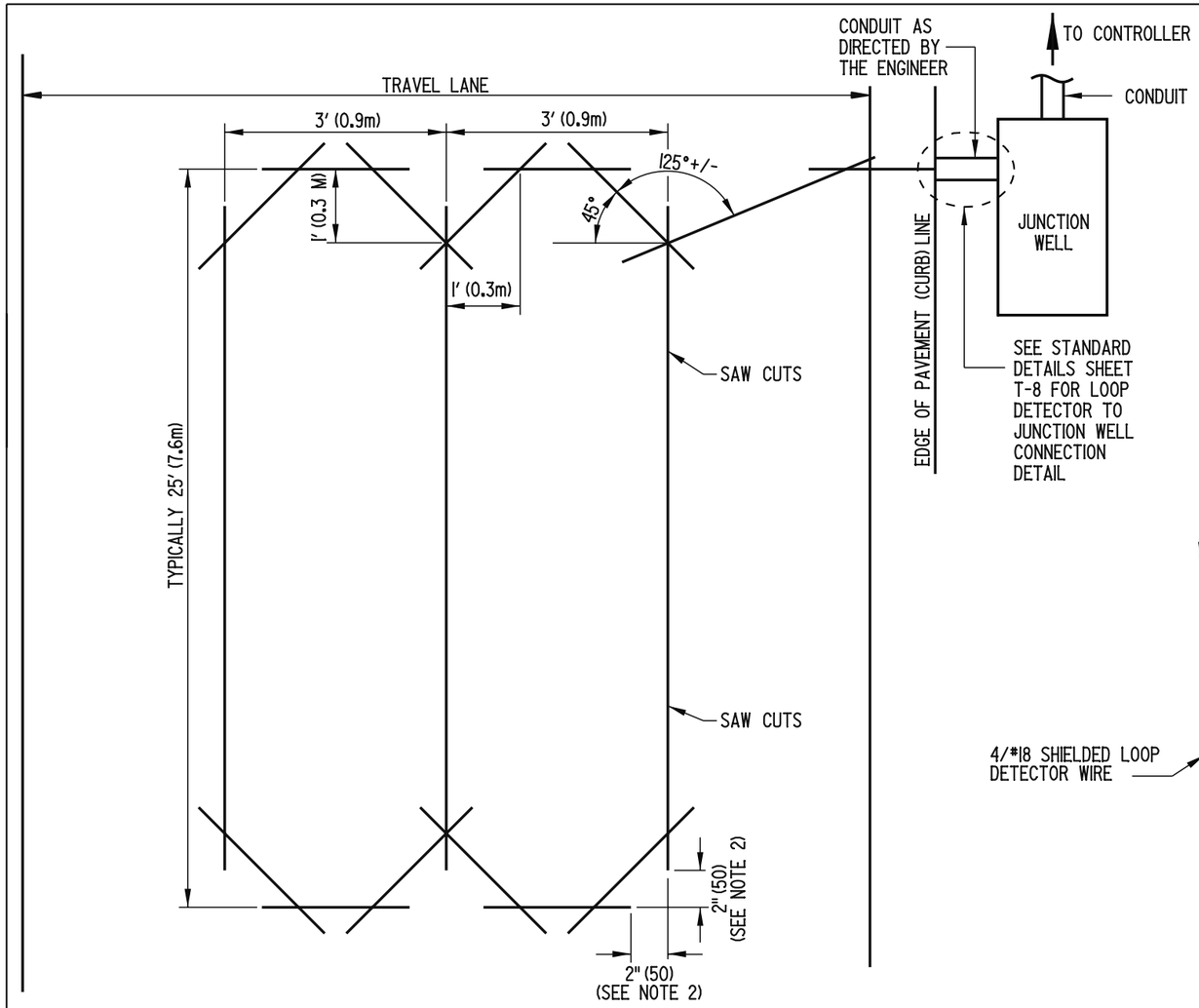
SPLICING DETAIL

(SEE NOTE 3)

DELAWARE DEPARTMENT OF TRANSPORTATION	TYPE #1 LOOP DETECTOR		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-9 (2005)	SHT. 1 OF 1	RECOMMENDED Jennifer M. O'Mara DESIGN ENGINEER 11/29/05 DATE

01/19/2006

SCALE : N.T.S.



WIRE SLOT CONSTRUCTION

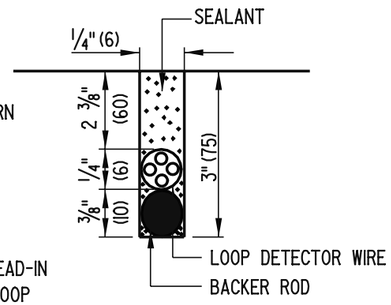
NOTES:

1). SAW CUTS FOR WIRE SLOT CONSTRUCTION SHALL BE EXTENDED BEYOND THE CORNERS SO THAT THE SLOT IS FULL DEPTH AT TURN POINTS. A FORTY-FIVE (45) DEGREE ANGLE SHALL BE CUT 1' (0.3m) BACK FROM THE POINT OF THE EXTENDED CORNER.

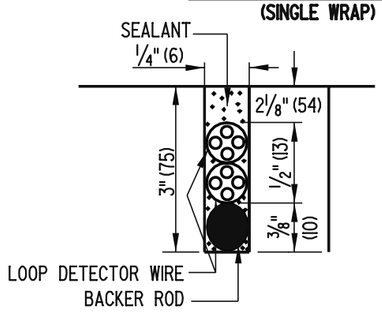
2). THE LONGITUDINAL / TRANSVERSE CUT SHALL BE STOPPED APPROXIMATELY 2" (50) FROM THE CORNER TO PREVENT THE TRIANGULAR PORTION OF THE PAVEMENT FROM BREAKING.

3). A MAXIMUM OF TWO LOOP DETECTORS CAN BE SPLICED TO ONE LEAD-IN CABLE. THE DETAIL ILLUSTRATES THE METHOD OF SPLICING TWO LOOP DETECTORS (LOOP #1 AND LOOP #2) TO A LEAD-IN CABLE.

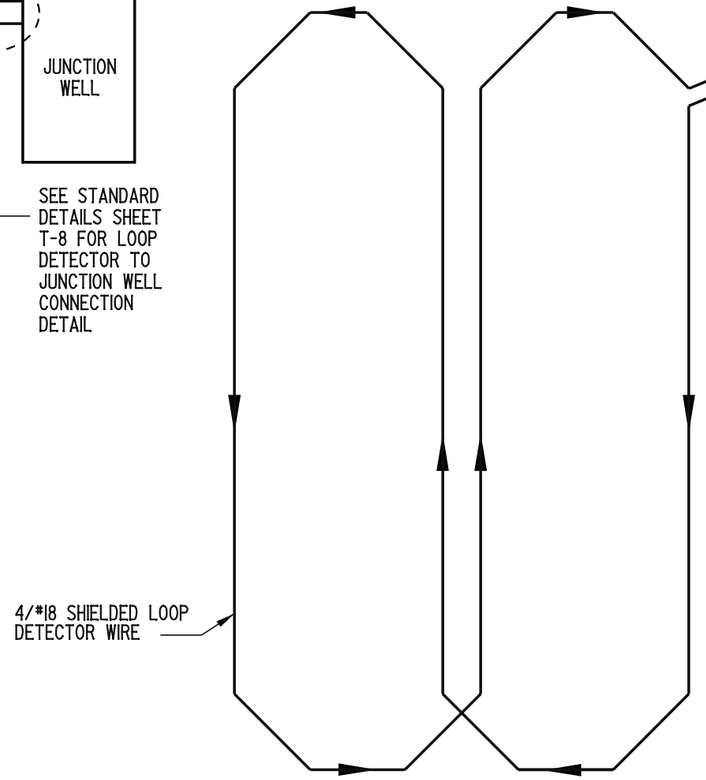
4). LOOP DETECTOR SHALL BE CENTERED IN TRAVEL LANE.



SECTION A - A

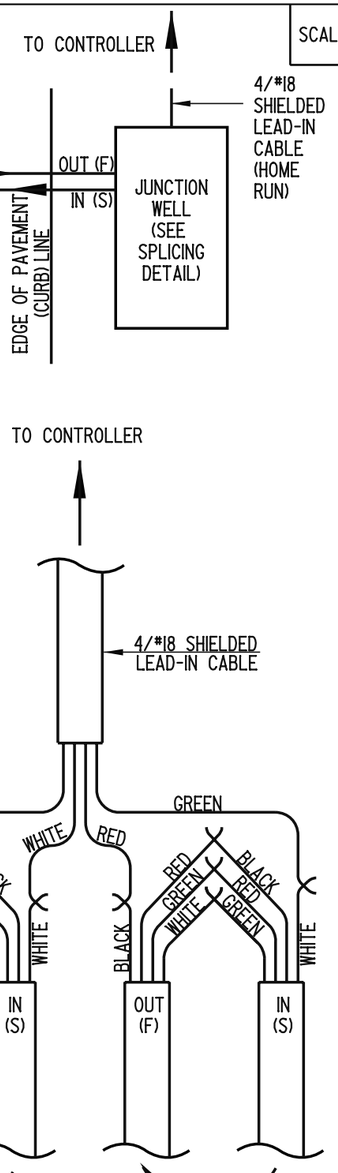


SECTION B - B



DETAILS FOR INSTALLING LOOP DETECTOR WIRE

(SINGLE WRAP)



SPLICING DETAIL

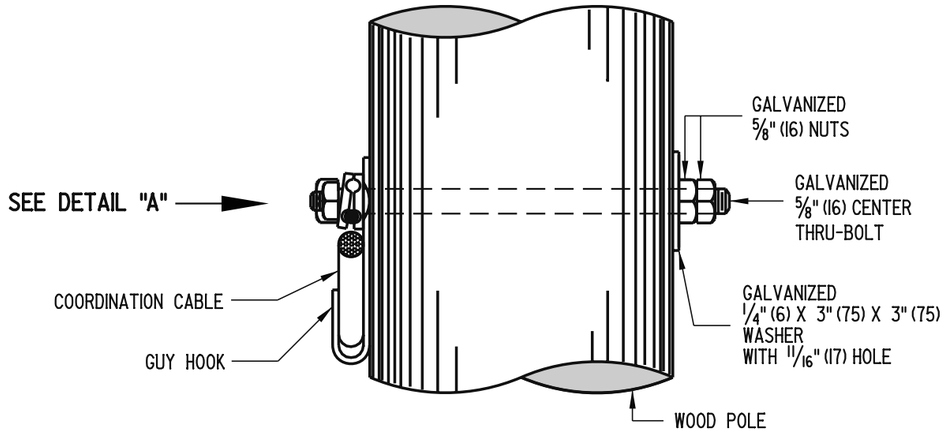
(SEE NOTE 3)

DELAWARE DEPARTMENT OF TRANSPORTATION	TYPE #2 LOOP DETECTOR		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-10 (2005)	SHT. 1 OF 1	RECOMMENDED Jennifer M. Oiller DESIGN ENGINEER 11/29/05 DATE

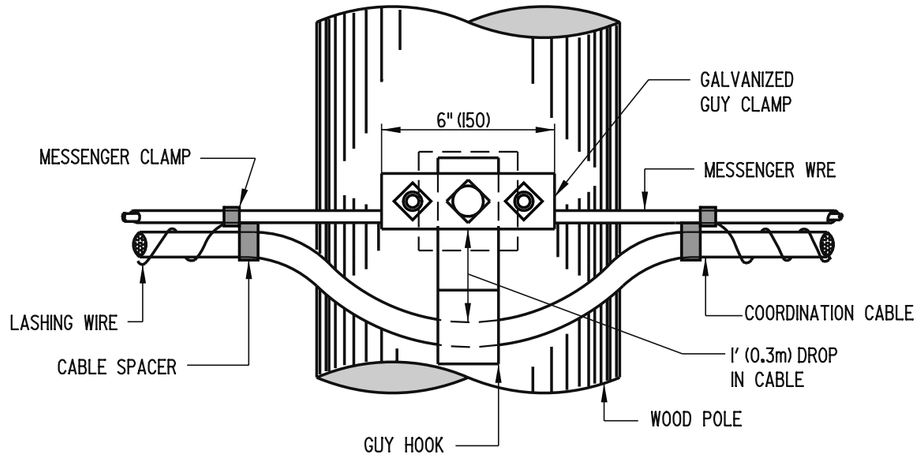
01/19/2006

SCALE : N.T.S.

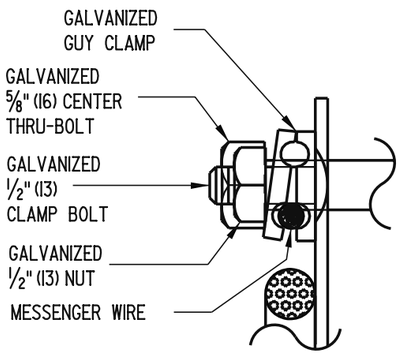
INTERMEDIATE



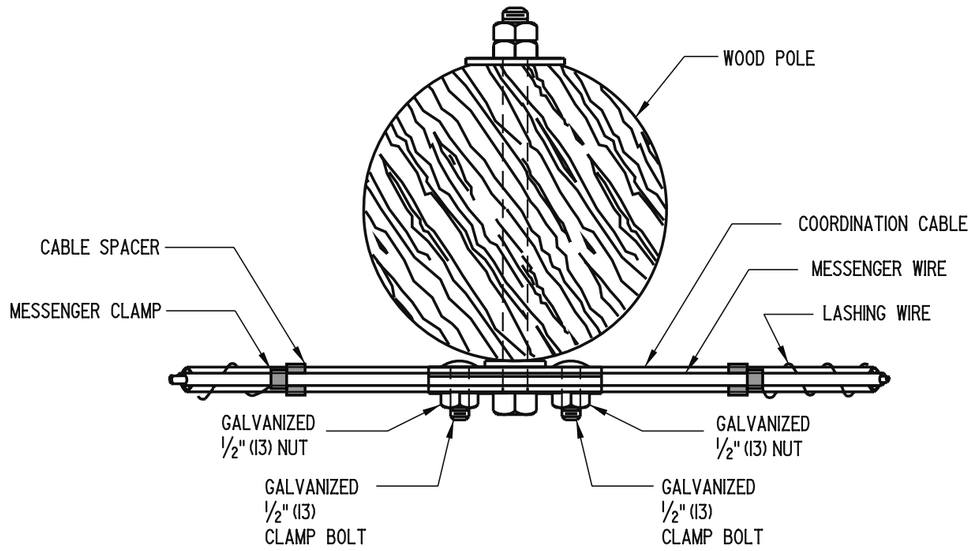
SIDE VIEW



FRONT VIEW



DETAIL "A"

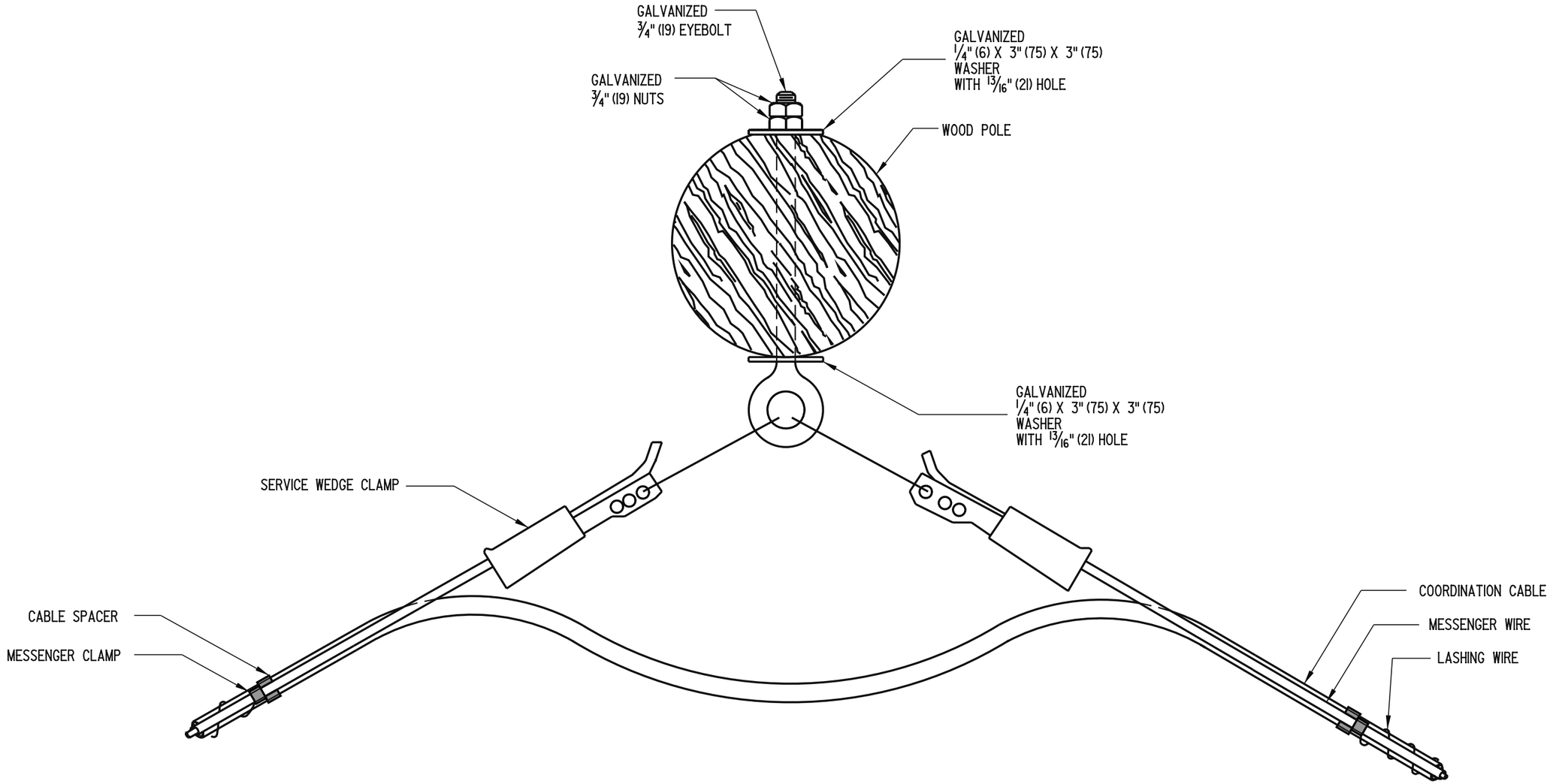


TOP VIEW

DELAWARE DEPARTMENT OF TRANSPORTATION	INTERMEDIATE MESSENGER WIRE ATTACHMENT ON WOOD POLES	APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-11 (2005) SHT. 1 OF 2	RECOMMENDED James M. Ojeda DESIGN ENGINEER 11/29/05 DATE

09/09/2005

SCALE : N.T.S.

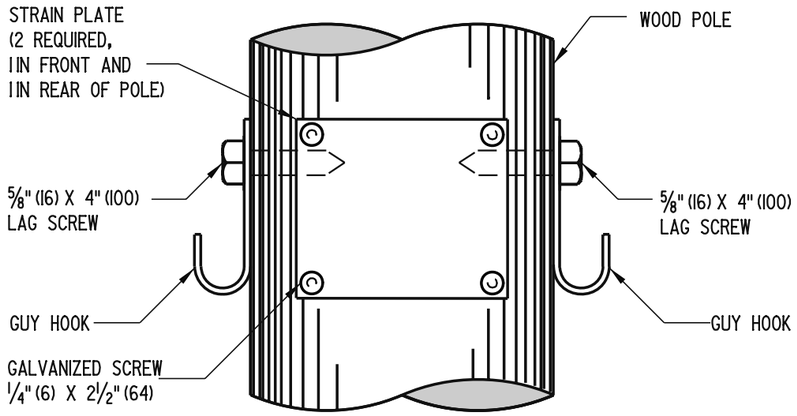


TOP VIEW

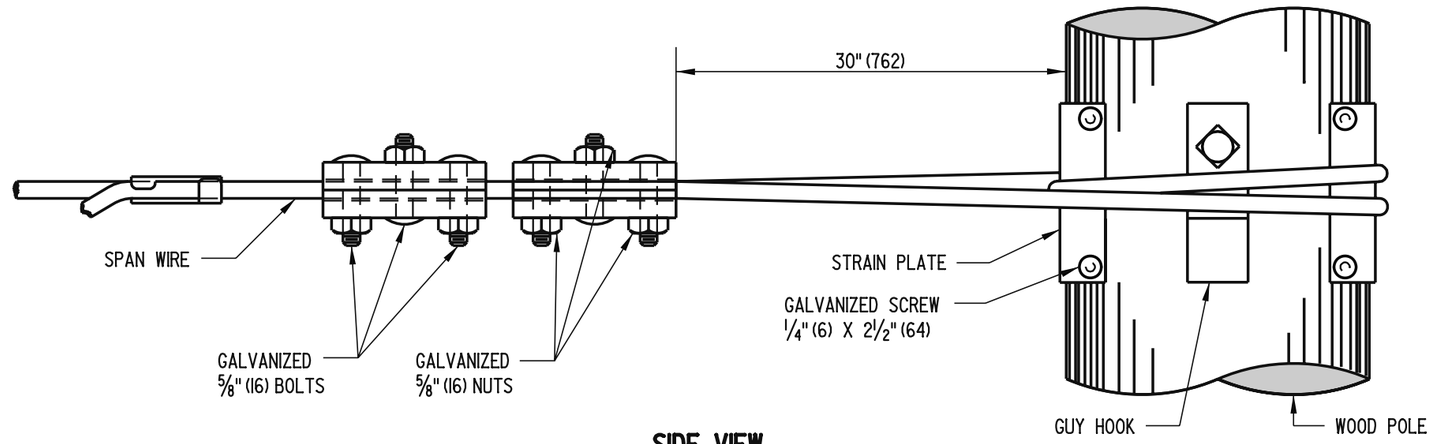
DELAWARE DEPARTMENT OF TRANSPORTATION	ANGULAR INTERMEDIATE MESSENGER WIRE ATTACHMENT		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-11 (2005)	SHT. 2 OF 2	RECOMMENDED DESIGN ENGINEER 11/29/05 DATE

09/27/2004

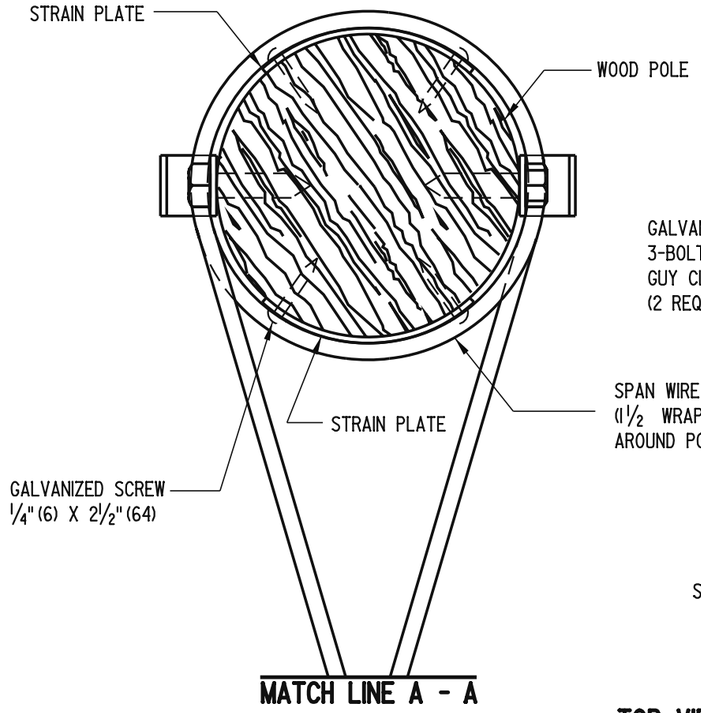
SCALE : N.T.S.



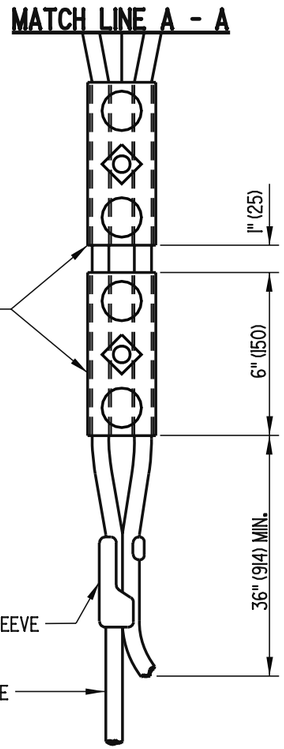
FRONT VIEW
(SPAN WIRE NOT SHOWN)



SIDE VIEW



MATCH LINE A - A



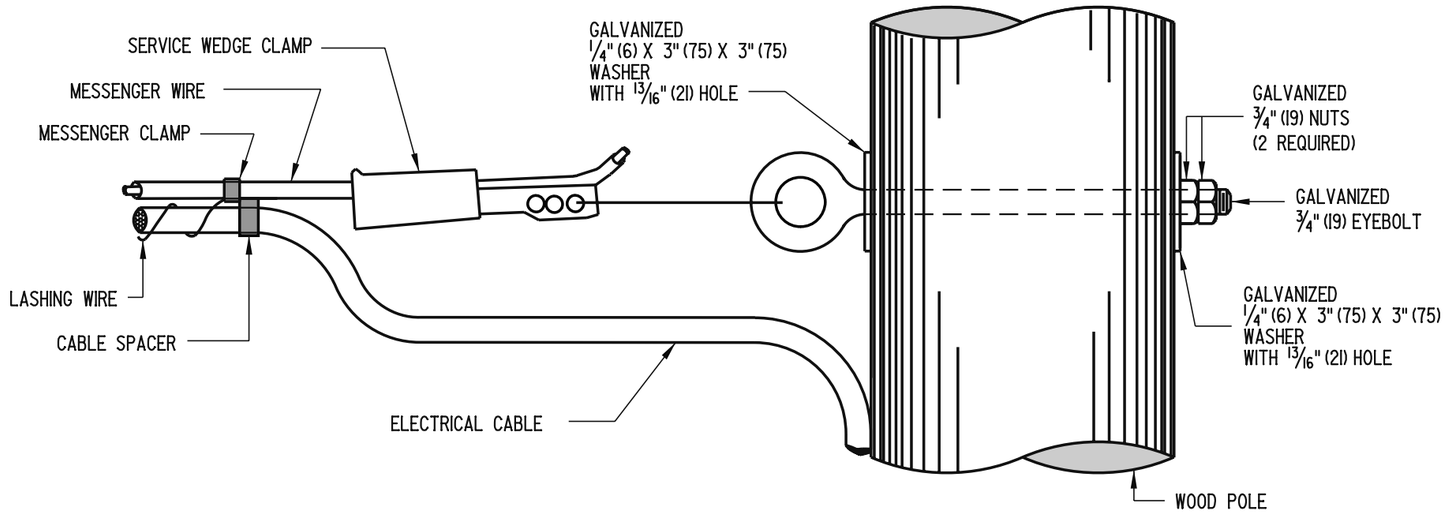
TOP VIEW

NOTE: SPAN WIRE ATTACHMENT BETWEEN METAL POLES IS THE SAME AS SHOWN FOR WOOD POLES EXCEPT THAT THE STRAIN PLATES AND GUY HOOKS ARE NOT USED. FOR DETAIL SEE T-14 SHEET 2 - "DEAD END MESSENGER WIRE ATTACHMENT, METAL POLES ".

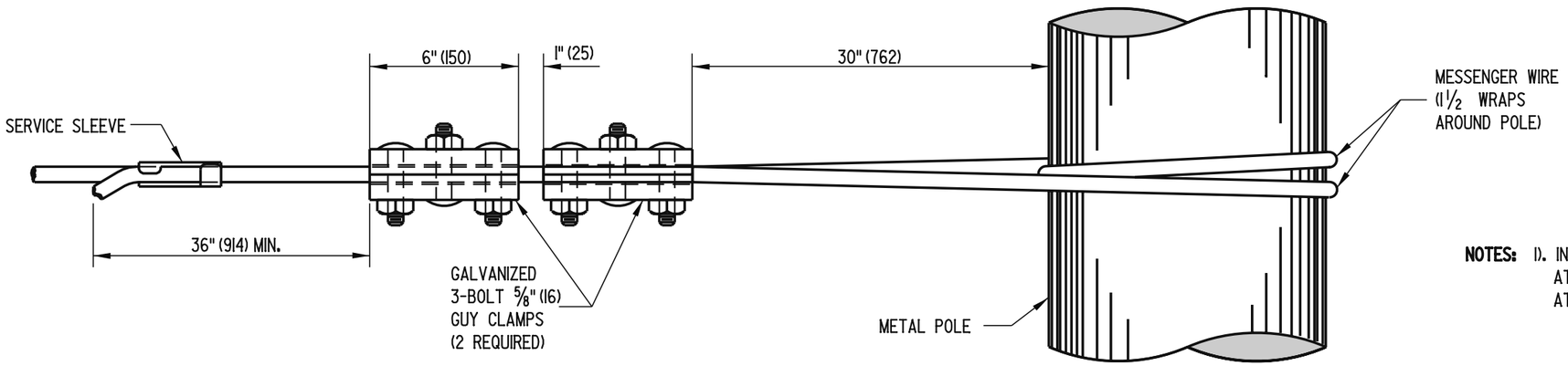
DELAWARE DEPARTMENT OF TRANSPORTATION	SPAN WIRE ATTACHMENT BETWEEN POLES	APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-12 (2005) SHT. 1 OF 2	RECOMMENDED James M. O'Neill DESIGN ENGINEER 11/29/05 DATE

09/09/2005

SCALE : N.T.S.



WOOD POLES



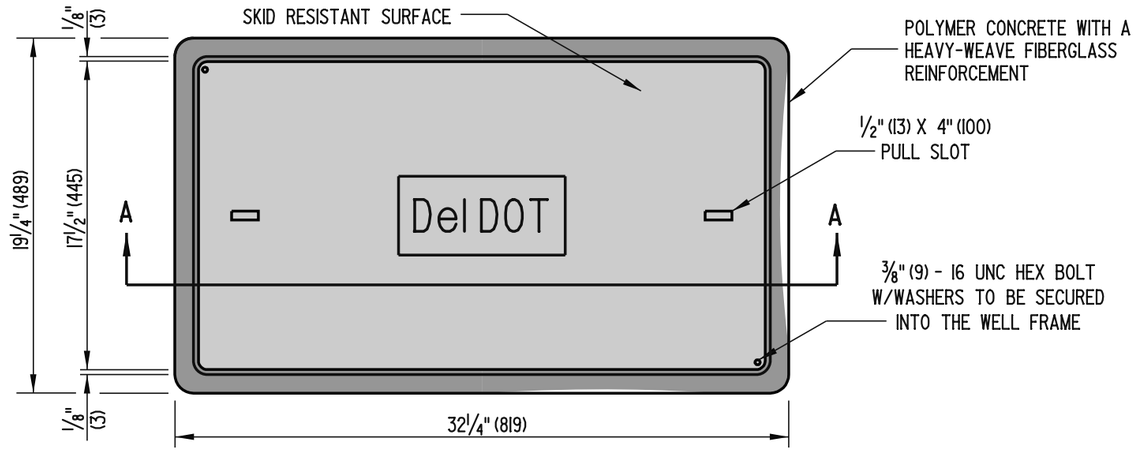
NOTES: 1). INSTALLATION METHOD SHOWN FOR DEAD END MESSENGER WIRE ATTACHMENT TO METAL POLES SHALL BE USED FOR SPAN WIRE ATTACHMENT BETWEEN METAL POLES.

METAL POLES

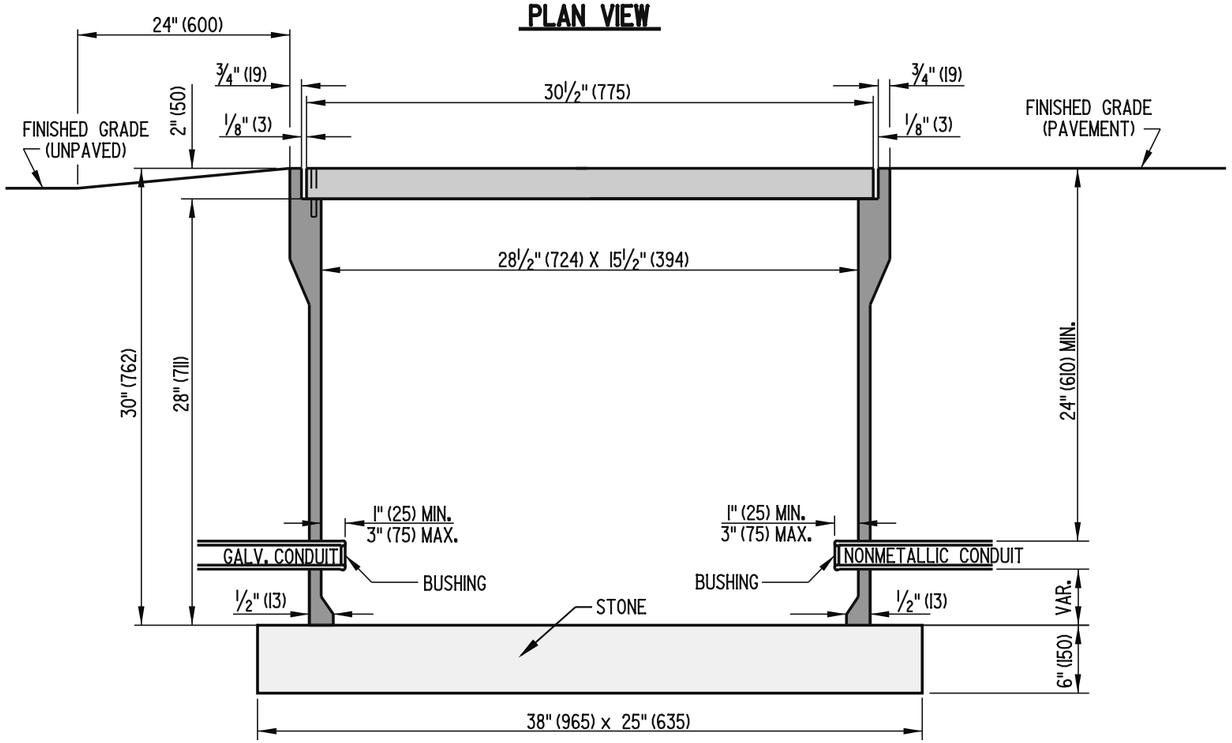
DELAWARE DEPARTMENT OF TRANSPORTATION	DEAD END MESSENGER WIRE ATTACHMENT		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-12 (2005)	SHT. 2 OF 2	RECOMMENDED James M. Ojeda DESIGN ENGINEER 11/29/05 DATE

09/09/2005

SCALE : N.T.S.



PLAN VIEW



SECTION A-A

NOTES:

1). TYPE 6 CONDUIT JUNCTION WELL SHALL BE PRECAST POLYMER CONCRETE.

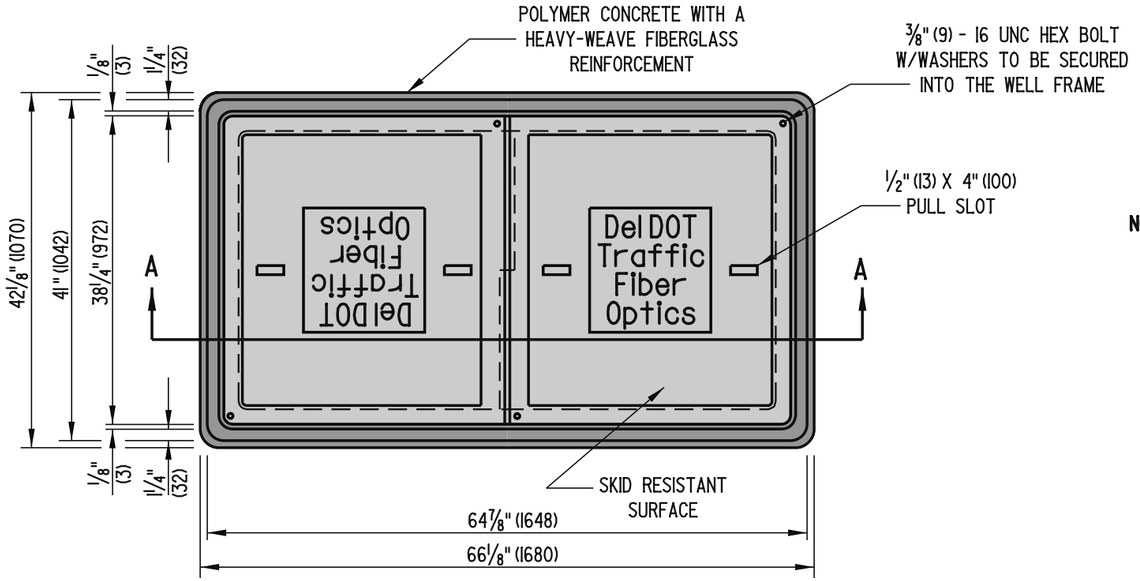
2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM THE CONDUIT JUNCTION WELL.

3). POLYMER CONCRETE COVERS SHALL BE THE HEAVY-DUTY TYPE WITH A DESIGN LOAD OF 15,000 LBS (6800 kg) OVER A 10" (255) SQUARE.

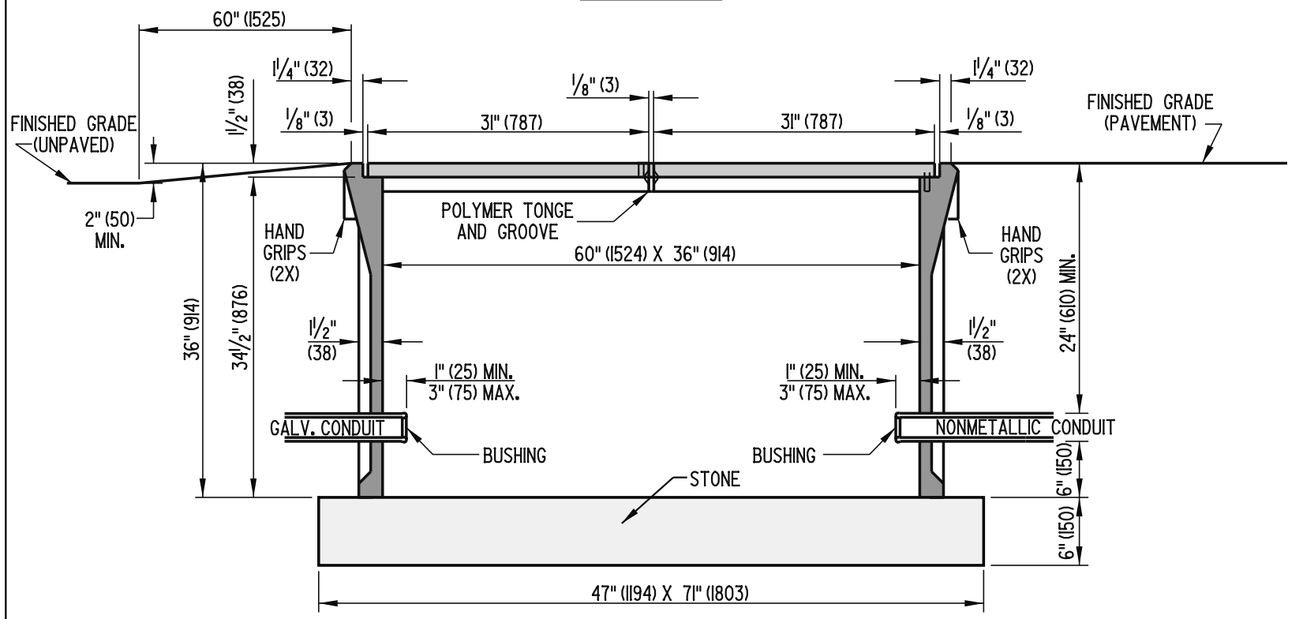
DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 6		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-13 (2005)	SHT. 1 OF 3	RECOMMENDED DESIGN ENGINEER 11/29/05 DATE

01/19/2006

SCALE : N.T.S.



PLAN VIEW



SECTION A-A

NOTES:

1). TYPE 7 CONDUIT JUNCTION WELL SHALL BE PRECAST POLYMER CONCRETE.

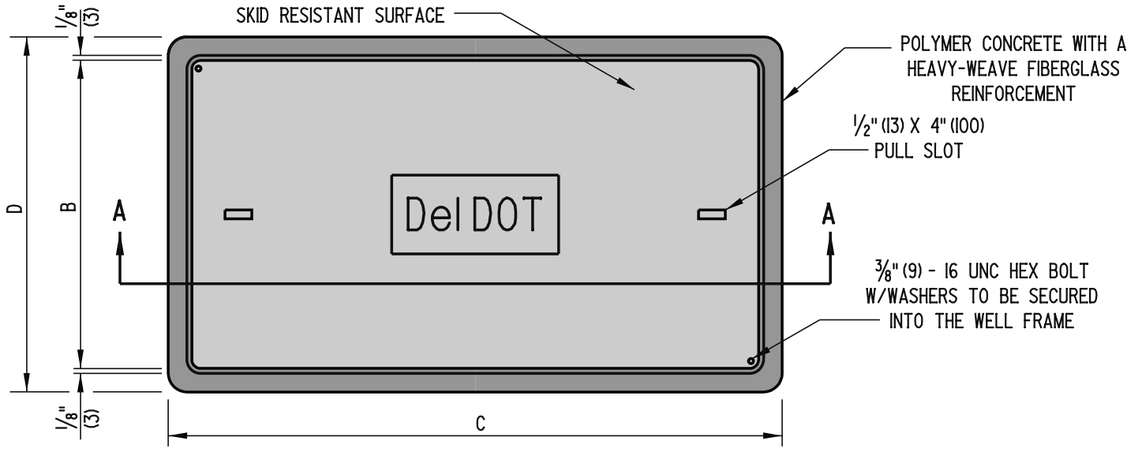
2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM THE CONDUIT JUNCTION WELL.

3). POLYMER CONCRETE COVERS SHALL BE THE HEAVY DUTY TYPE WITH A DESIGN LOAD OF 15,000 LBS (6800 kg) OVER A 10" (255) SQUARE.

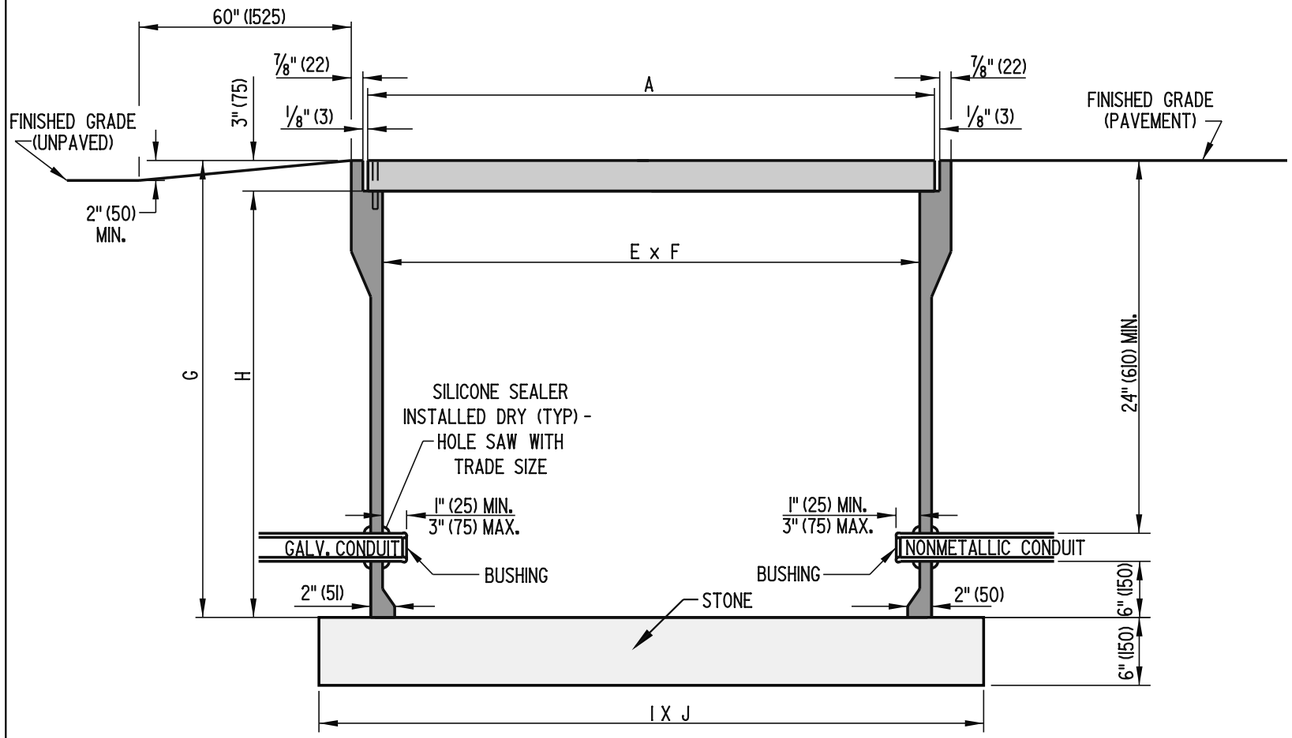
DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 7		APPROVED CHIEF ENGINEER — DATE 10/10/06
	STANDARD NO. T-13 (2006)	SHT. 2 OF 3	RECOMMENDED DESIGN ENGINEER — DATE 10/9/06

05/13/2006

SCALE : N.T.S.



PLAN VIEW



SECTION A-A

NOTES:

1). TYPES 8 & 10 CONDUIT JUNCTION WELLS SHALL BE PRECAST POLYMER CONCRETE.

2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM THE CONDUIT JUNCTION WELL.

3). POLYMER CONCRETE COVERS SHALL BE THE HEAVY-DUTY TYPE WITH A DESIGN LOAD OF 15,000 LBS (6800 kg) OVER A 10" (255) SQUARE.

DIMENSIONS		TYPE 8	TYPE 10
COVER	A	47 5/8" (1210)	35 5/8" (905)
	B	30 1/8" (765)	24" (610)
FRAME	C	49 5/8" (1261)	37 5/8" (956)
	D	32 1/8" (816)	26" (660)
	E	45 5/8" (1159)	33 7/8" (860)
	F	28 1/8" (714)	22 1/4" (565)
	G	36" (914)	30" (1067)
	H	33" (838)	27" (991)
BASE	I	58" (1473)	46" (1168)
	J	40" (1016)	34" (864)

DELAWARE
DEPARTMENT OF TRANSPORTATION

CONDUIT JUNCTION WELLS, TYPES 8 & 10

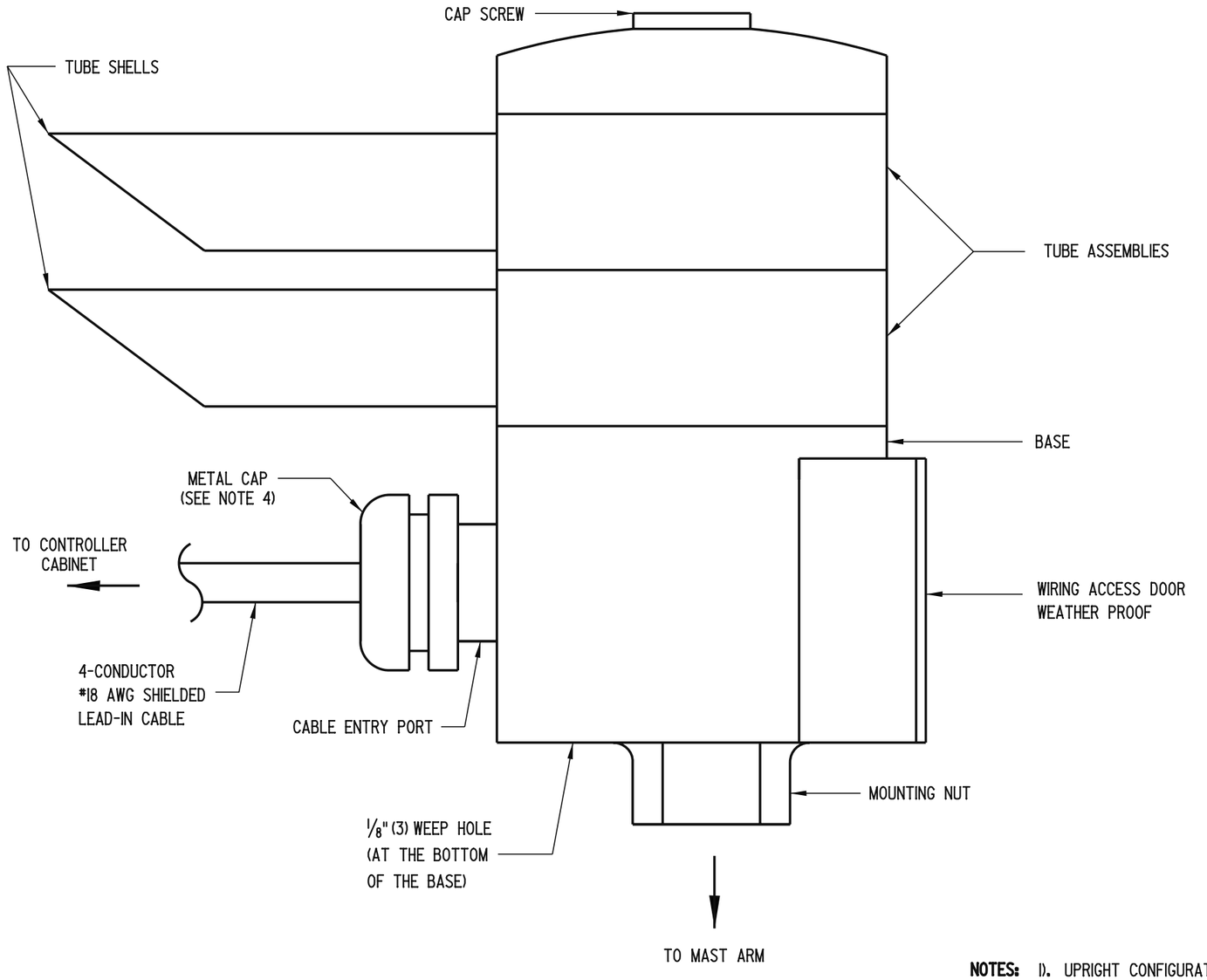
STANDARD NO. T-13 (2006) | SHT. 3 OF 3

APPROVED _____ CHIEF ENGINEER DATE 10/10/06

RECOMMENDED _____ DESIGN ENGINEER DATE 10/3/06

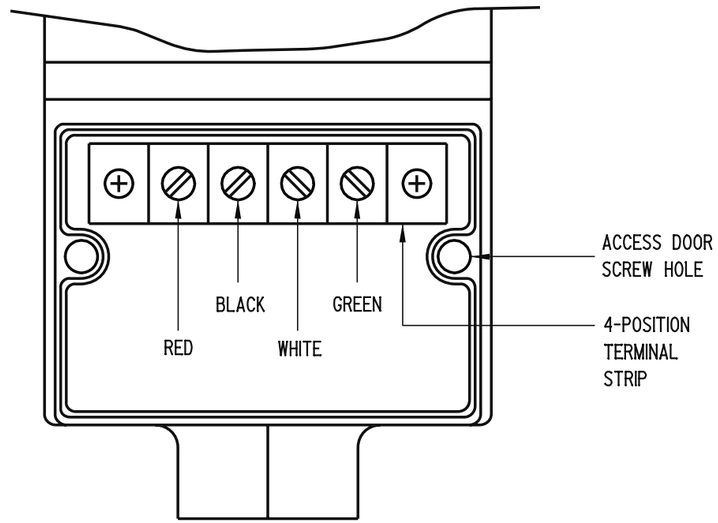
05/13/2006

SCALE : N.T.S.



SIDE VIEW

CABLE CONNECTIONS TO TERMINAL STRIP



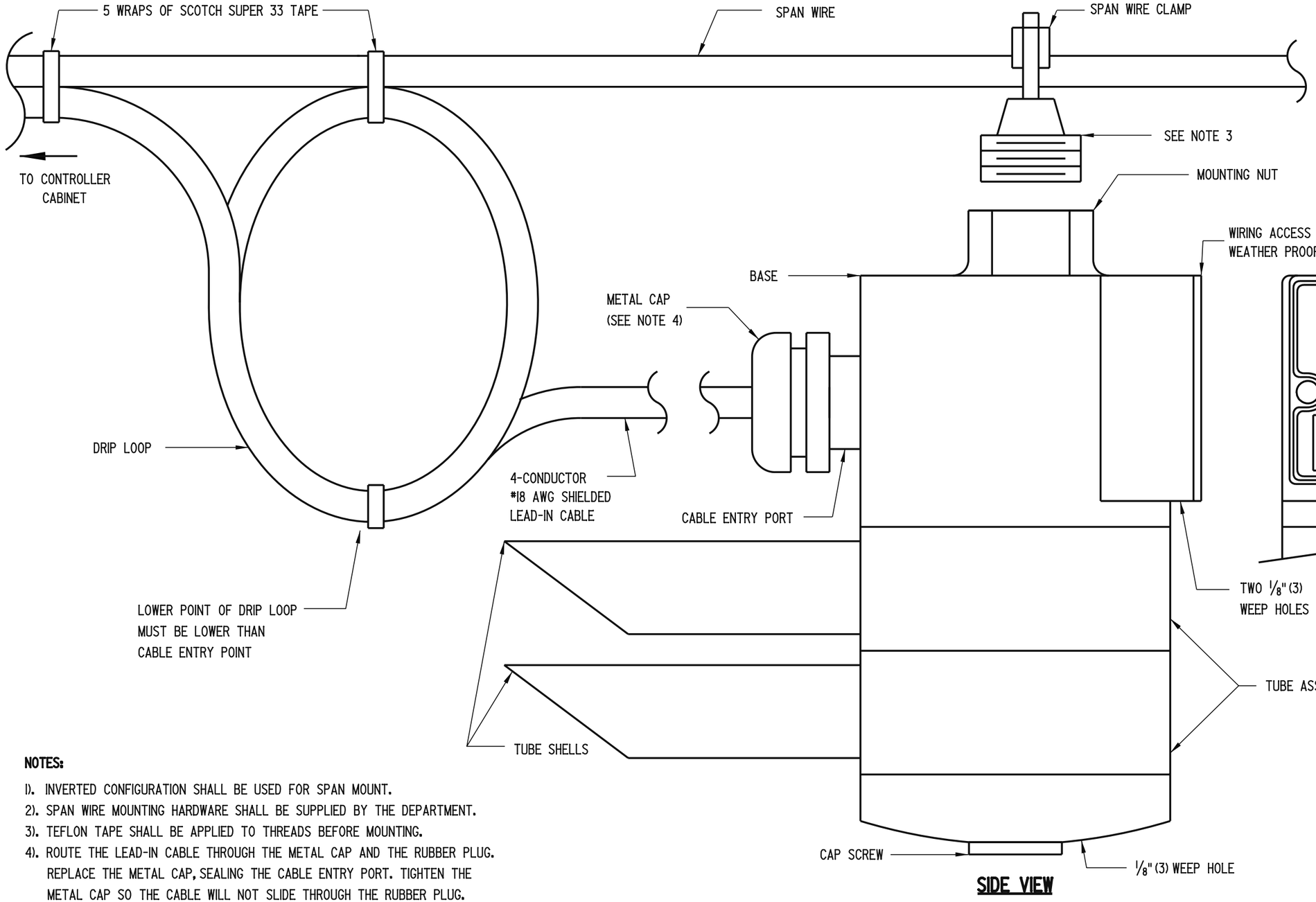
FRONT VIEW
(CABLE IS NOT SHOWN)

NOTES:
1). UPRIGHT CONFIGURATION SHALL BE USED FOR MOUNTING ON MAST ARMS, SIGNAL HEAD FRAMEWORKS AND PEDESTALS.
2). UPRIGHT MOUNTING HARDWARE SHALL BE SUPPLIED BY THE DEPARTMENT.
3). TEFLON TAPE SHALL BE APPLIED TO THREADS BEFORE MOUNTING.
4). ROUTE THE LEAD-IN CABLE THROUGH THE METAL CAP AND THE RUBBER PLUG. REPLACE THE METAL CAP, SEALING THE CABLE ENTRY PORT. TIGHTEN THE METAL CAP SO THE CABLE WILL NOT SLIDE THROUGH THE RUBBER PLUG.

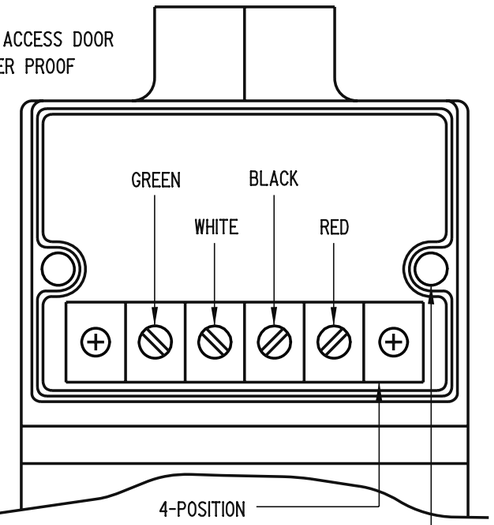
DELAWARE DEPARTMENT OF TRANSPORTATION	EMERGENCY PREEMPTION RECEIVER, UPRIGHT MOUNT		APPROVED CHIEF ENGINEER 10/10/06 DATE
	STANDARD NO. T-14 (2006)	SHT. 1 OF 2	RECOMMENDED DESIGN ENGINEER 10/3/06 DATE

06/27/2006

SCALE : N.T.S.



CABLE CONNECTIONS TO TERMINAL STRIP



FRONT VIEW
(CABLE IS NOT SHOWN)

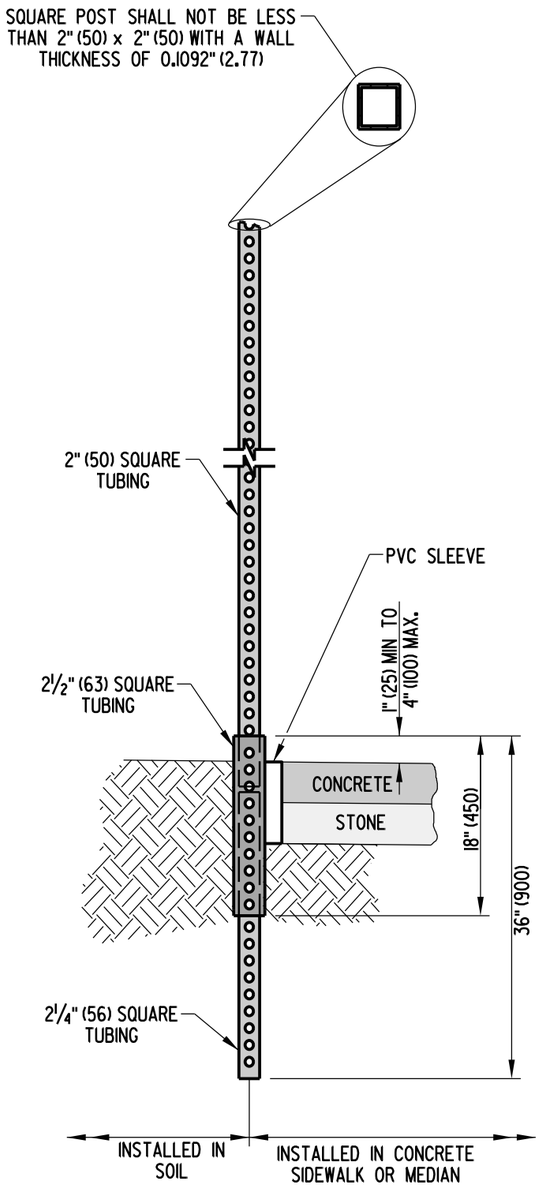
NOTES:

1). INVERTED CONFIGURATION SHALL BE USED FOR SPAN MOUNT.
2). SPAN WIRE MOUNTING HARDWARE SHALL BE SUPPLIED BY THE DEPARTMENT.
3). TEFLON TAPE SHALL BE APPLIED TO THREADS BEFORE MOUNTING.
4). ROUTE THE LEAD-IN CABLE THROUGH THE METAL CAP AND THE RUBBER PLUG. REPLACE THE METAL CAP, SEALING THE CABLE ENTRY PORT. TIGHTEN THE METAL CAP SO THE CABLE WILL NOT SLIDE THROUGH THE RUBBER PLUG.

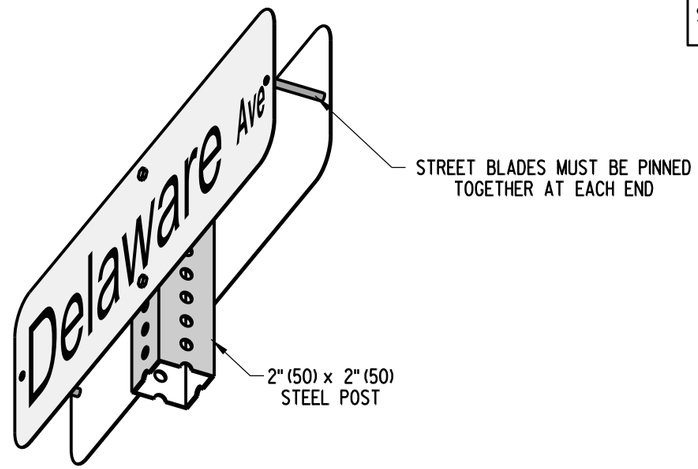
DELAWARE DEPARTMENT OF TRANSPORTATION	EMERGENCY PREEMPTION RECEIVER, INVERTED MOUNT		APPROVED Carolann Wicks CHIEF ENGINEER 12/5/05 DATE
	STANDARD NO. T-14 (2005)	SHT. 2 OF 2	RECOMMENDED James M. O'Neill DESIGN ENGINEER 11/29/05 DATE

09/09/2005

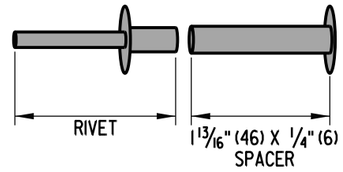
SCALE : N.T.S.



BREAK-AWAY ASSEMBLY



TYPICAL ASSEMBLY



PIN ASSEMBLY

NOTE: THE PIN ASSEMBLY IS TO BE USED WITH THE INSTALLATION OF BACK TO BACK STREET BLADE SIGNS WITH 6" (150) LETTERS.

NOTES:

1). SQUARE TUBES ARE TO BE FORMED FROM GALVANIZED SHEET STRUCTURAL (PHYSICAL) QUALITY, ASTM A 446, GRADE A, COATING DESIGNATION G 90, REGULAR SPANGLE, OR HOT ROLLED CARBON SHEET STEEL STRUCTURAL (PHYSICAL) QUALITY, ASTM A 57, GRADE 33.

2). NOMINAL OUTSIDE DIMENSIONS ARE AS FOLLOWS;
   A). 2" (50) x 2" (50) +/- 0.008
   2¼" (56) x 2¼" (56) +/- 0.010
   2½" (63) x 2½" (63) +/- 0.010

3). ALL FOUR SIDES ARE TO HAVE EVENLY SPACED 7/16" (12) DIAMETER HOLES ON 1" (25) CENTERS THE ENTIRE LENGTH OF THE TUBE.

4). STANDARD CORNER RADIUS SHALL BE 5/32" (4).

5). THE FASTENERS TO BE SUPPLIED UNDER THIS SPECIFICATION SHALL BE 5/16" (8), GRADE 5 UNC CORNER BOLTS WITH CADMIUM OR ZINC PLATING. INSTALLATION OF SIGNS SHALL BE WITH 3/8" (10) x 2½" (63) BOLT WITH LOCKNUT AND WASHER.

6). THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" (100) INSIDE DIAMETER MINIMUM, 6" (150) INSIDE DIAMETER MAXIMUM) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL BE SET ON TOP OF THE SOIL.

DELAWARE
DEPARTMENT OF TRANSPORTATION

BREAKWAY SIGN POST AND PIN ASSEMBLY DETAILS

STANDARD NO. T-15 (2009) | **SHT. 1 OF 1**

APPROVED SIGNATURE ON FILE — CHIEF ENGINEER — 01/19/2010 — DATE

RECOMMENDED SIGNATURE ON FILE — DESIGN ENGINEER — 01/14/2010 — DATE

01/08/2010