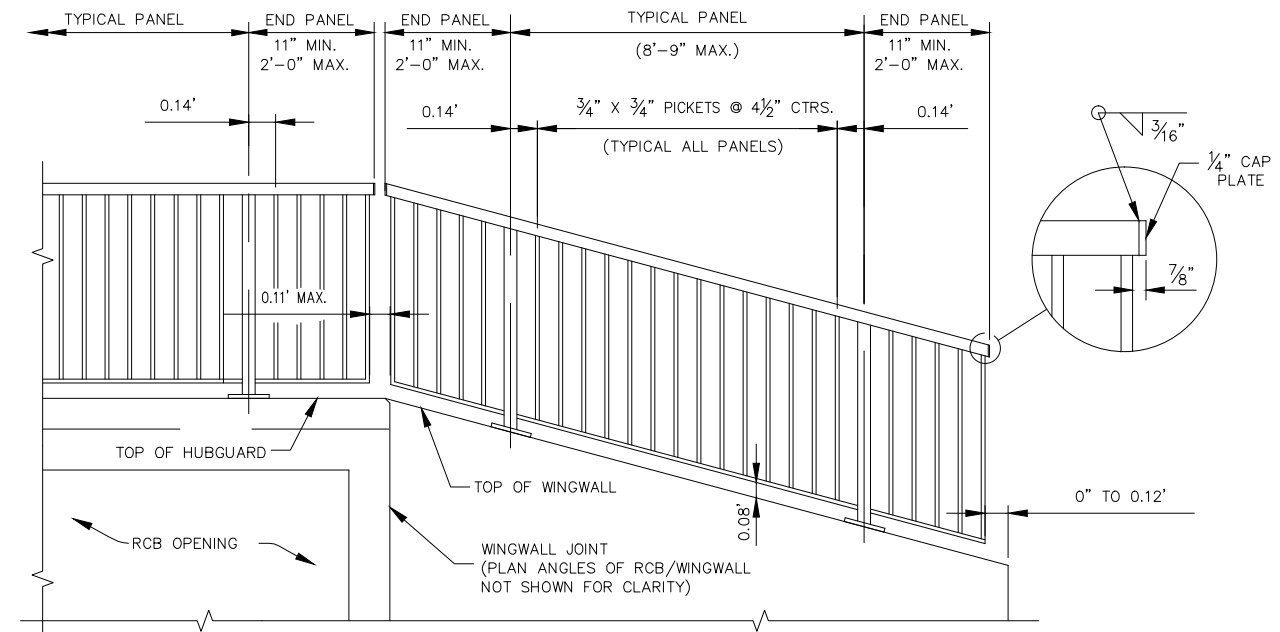
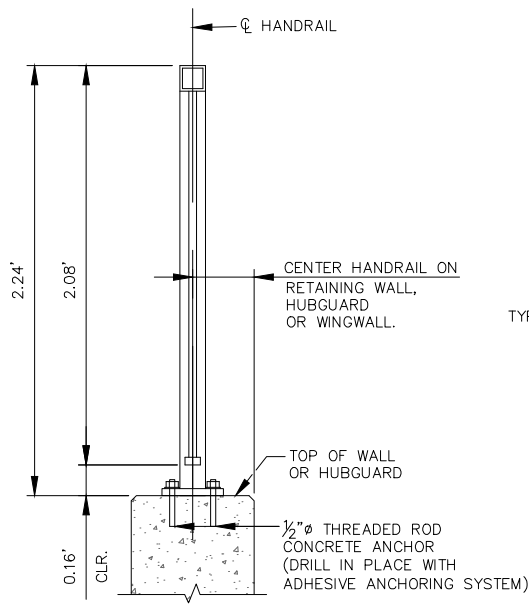


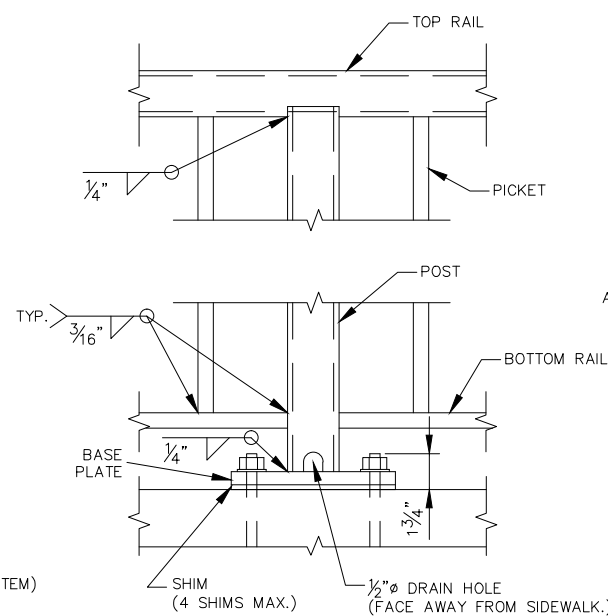
TYPICAL METAL HANDRAIL ELEVATION ON CONCRETE RETAINING WALL



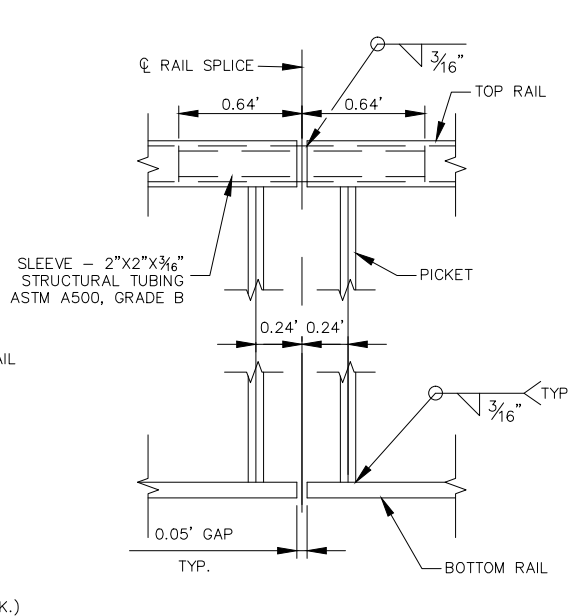
TYPICAL METAL HANDRAIL ELEVATION ON RCB HUBGUARD & WINGWALL



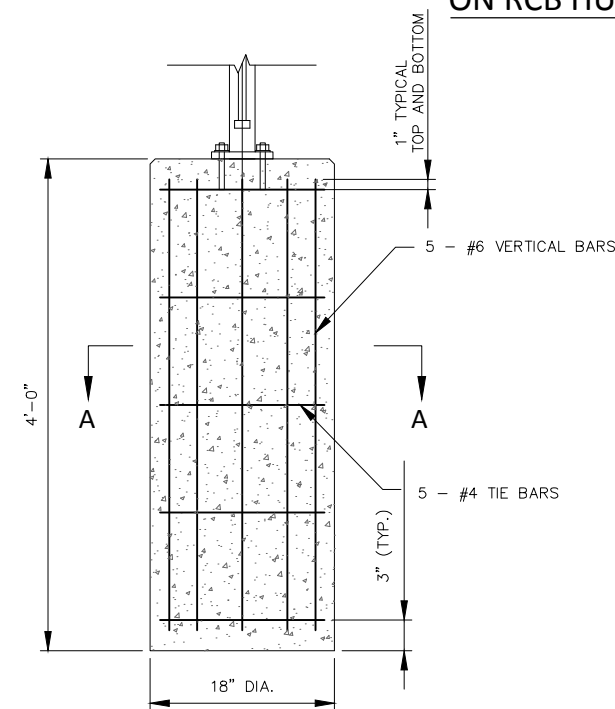
SECTION THRU RAIL



POST DETAIL



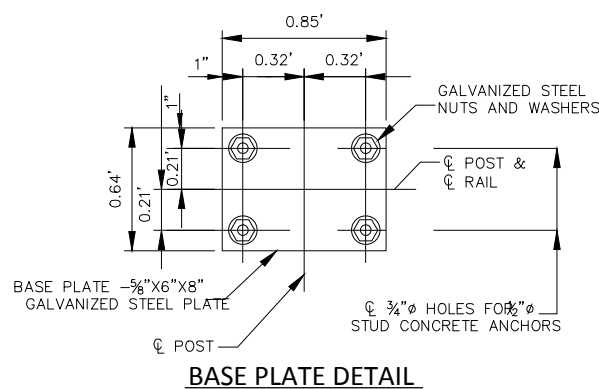
RAIL SPLICE DETAIL



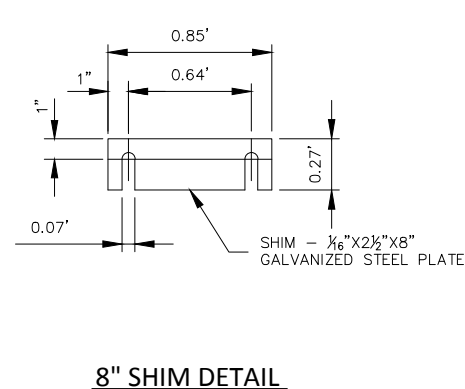
POST FOUNDATION DETAIL

HANDRAIL GENERAL NOTES:

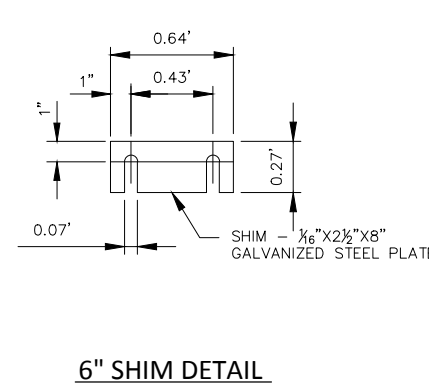
1. GALVANIZE ALL RAIL, POSTS, PICKETS, AND BASE PLATES AFTER FABRICATION IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123. NO FIELD GALVANIZING WILL BE ALLOWED. HANDRAILS SHALL BE PROTECTED FROM ANY DAMAGE TO THE GALVANIZED SURFACES. HANDRAILS DELIVERED TO THE JOB SITE WITH DAMAGED GALVANIZING SHALL BE RETURNED TO THE MANUFACTURER TO BE RE-GALVANIZED.
2. SET RAILS PARALLEL TO THE TOP OF THE WALL. SET POSTS AND PICKETS VERTICAL IN BOTH PLANES OF THE HANDRAIL. SHIMS MAY BE USED BETWEEN CONCRETE AND BASE PLATE OF STEEL POST.
3. GRIND SMOOTH ALL TOP AND BOTTOM RAIL-TO-POST WELDED CONNECTIONS. FIELD WELDING IS NOT PERMITTED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OF THE HANDRAIL. FIELD VERIFY AS-BUILT DIMENSIONS AND ELEVATIONS OF RETAINING WALLS, HUBGUARDS OR WINGWALLS PRIOR TO FABRICATION OF HANDRAIL. POST SPACING WILL BE REVIEWED DURING THE SHOP DRAWING REVIEW PERIOD TO COORDINATE WITH EXPANSION AND CONTRACTION JOINT SPACING IN THE WALL.
4. FABRICATE HANDRAIL IN LENGTHS TO INCLUDE A MINIMUM OF ONE AND A MAXIMUM OF THREE PANELS.
5. ATTACH TOP RAIL MEMBERS TO AT LEAST TWO POSTS. LOCATE CENTER OF RAIL SPLICES 1'-9" FROM CENTERLINE OF POST UNLESS SHOWN OTHERWISE.
6. THE THREADED ROD CONCRETE ANCHORS SHALL BE GALVANIZED AND PROVIDE A MINIMUM PULLOUT STRENGTH OF 8000 POUNDS ON 4000 PSI CONCRETE. LENGTH OF EMBEDMENT INTO CONCRETE SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS. AFTER THE HOLES ARE DRILLED, REMOVE ALL LOOSE MATERIAL BY USING A WIRE BRUSH TO FREE THE DUST FROM THE SIDE OF THE HOLE AND THEN VACUUMING TO REMOVE MATERIAL AND DUST. PLACE EPOXY CAPSULE SYSTEM IN THE HOLE AND INSERT THE THREADED ROD IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS.
7. ALL TOOLS, MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE PAID FOR UNDER THE BID ITEM "HANDRAIL". THE HANDRAIL IS TO BE BID ON A PER LINEAR FOOT BASIS MEASURED FROM END TO END OF HANDRAIL.



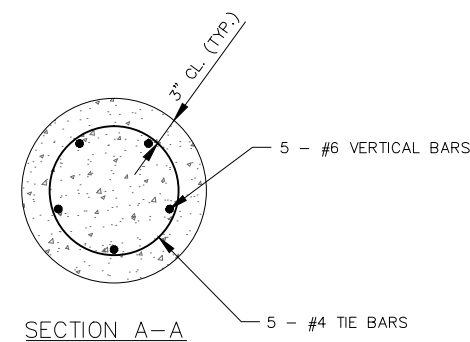
BASE PLATE DETAIL



8" SHIM DETAIL



6" SHIM DETAIL

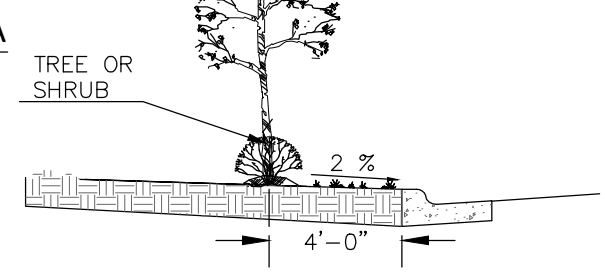
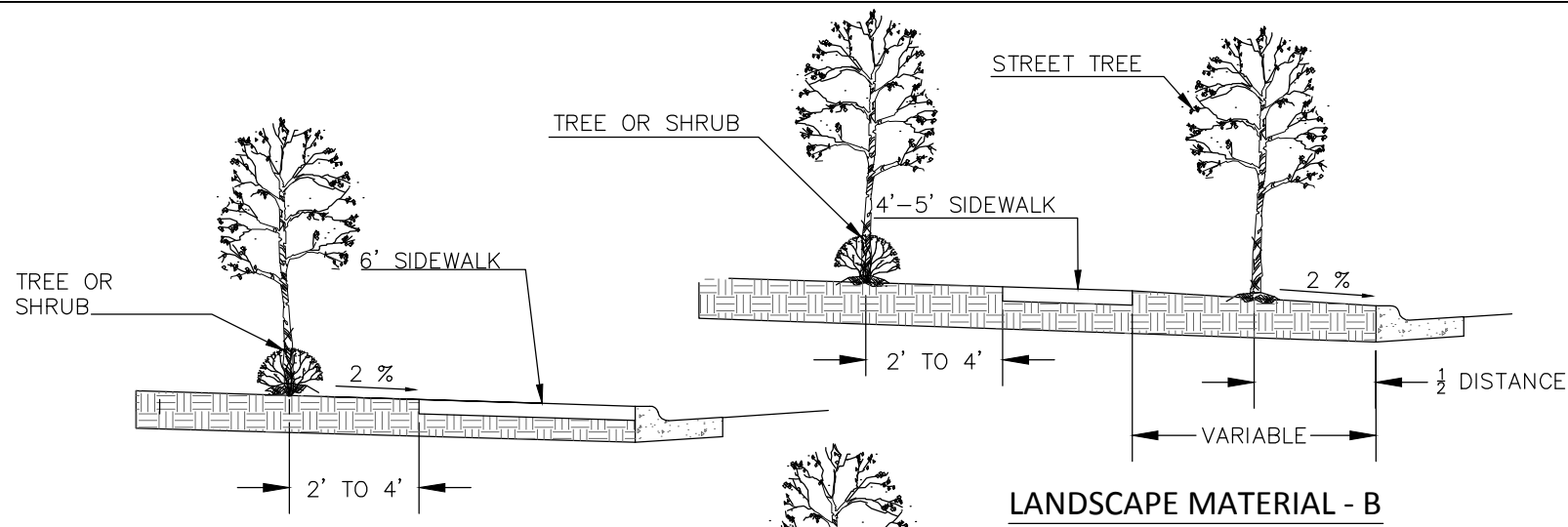


SECTION A-A

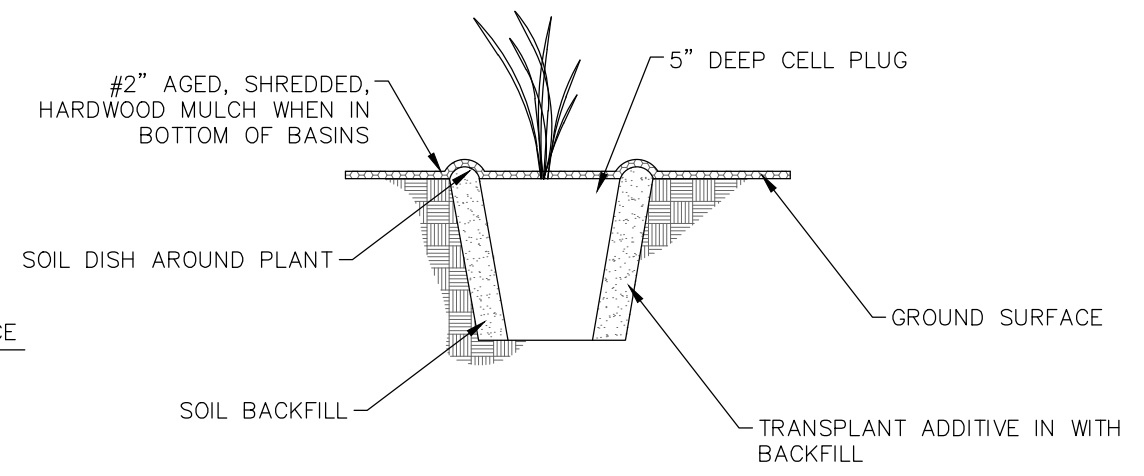
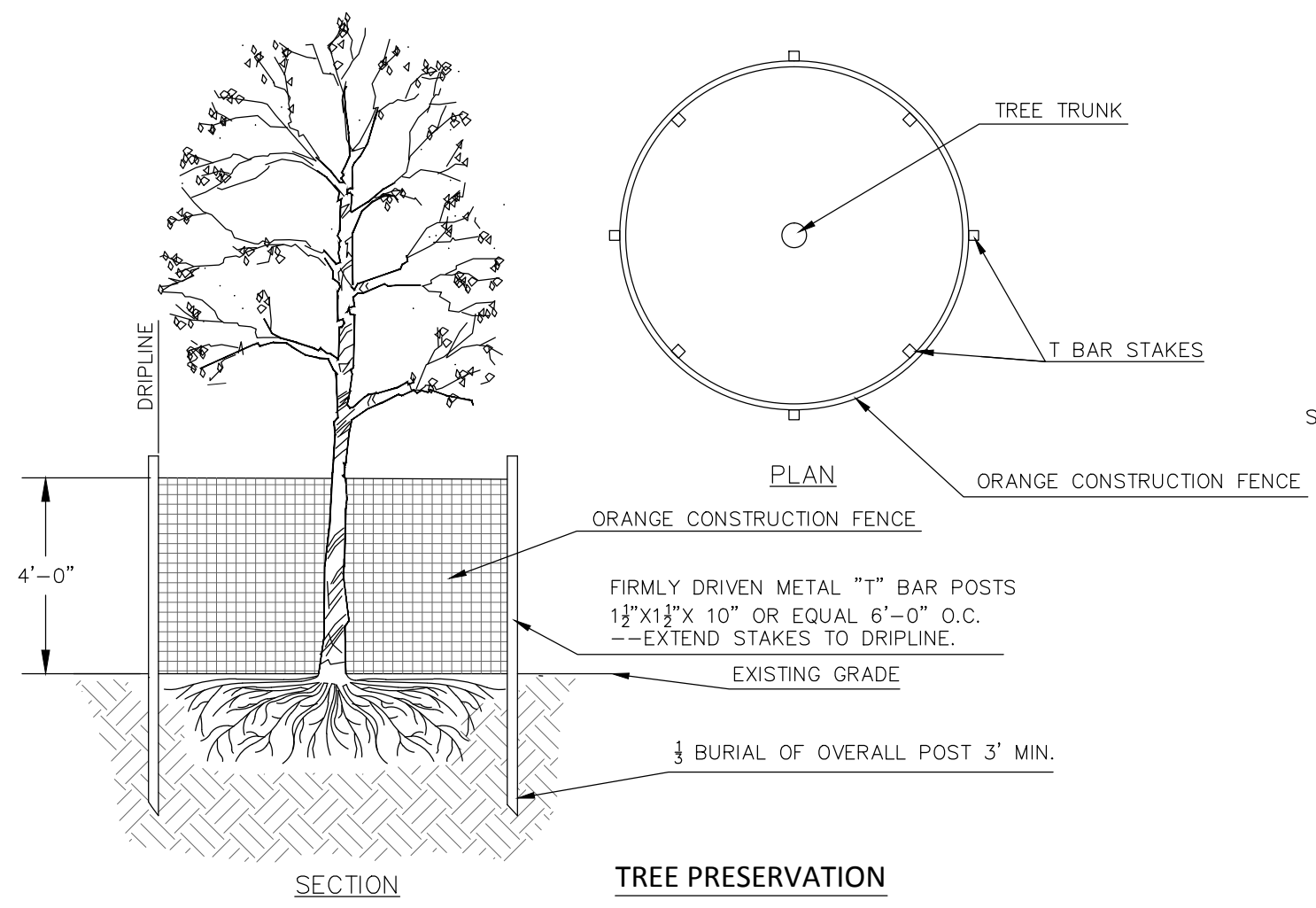
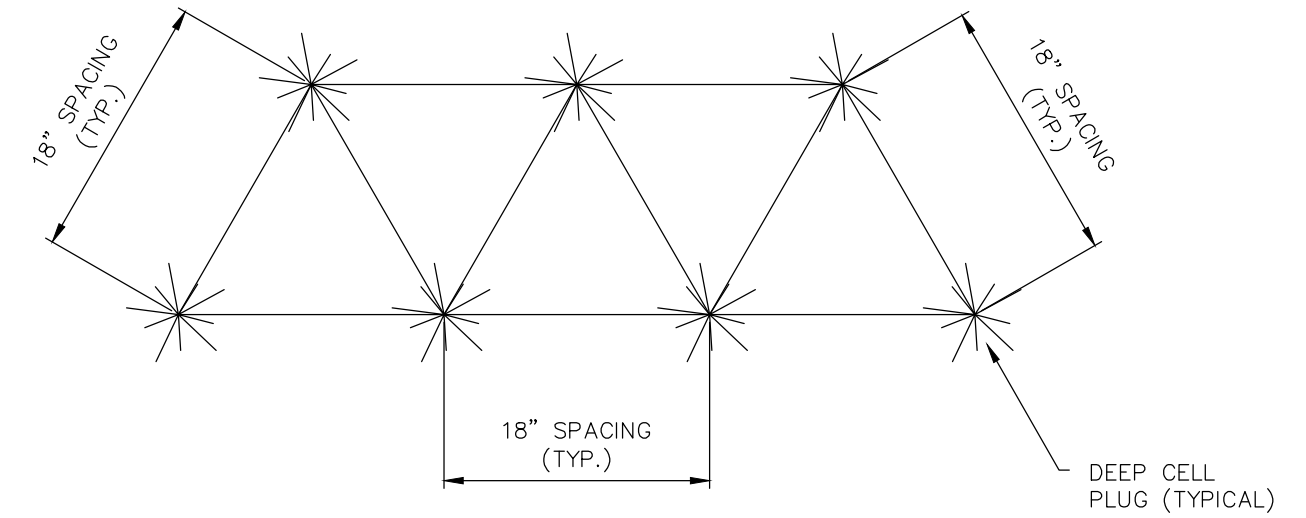


METAL HANDRAILS

SCALE:	NO SCALE	REV.	
DETAIL NO:	MIS-001		
DATE:	03-16-15		



PLACING LANDSCAPE MATERIALS



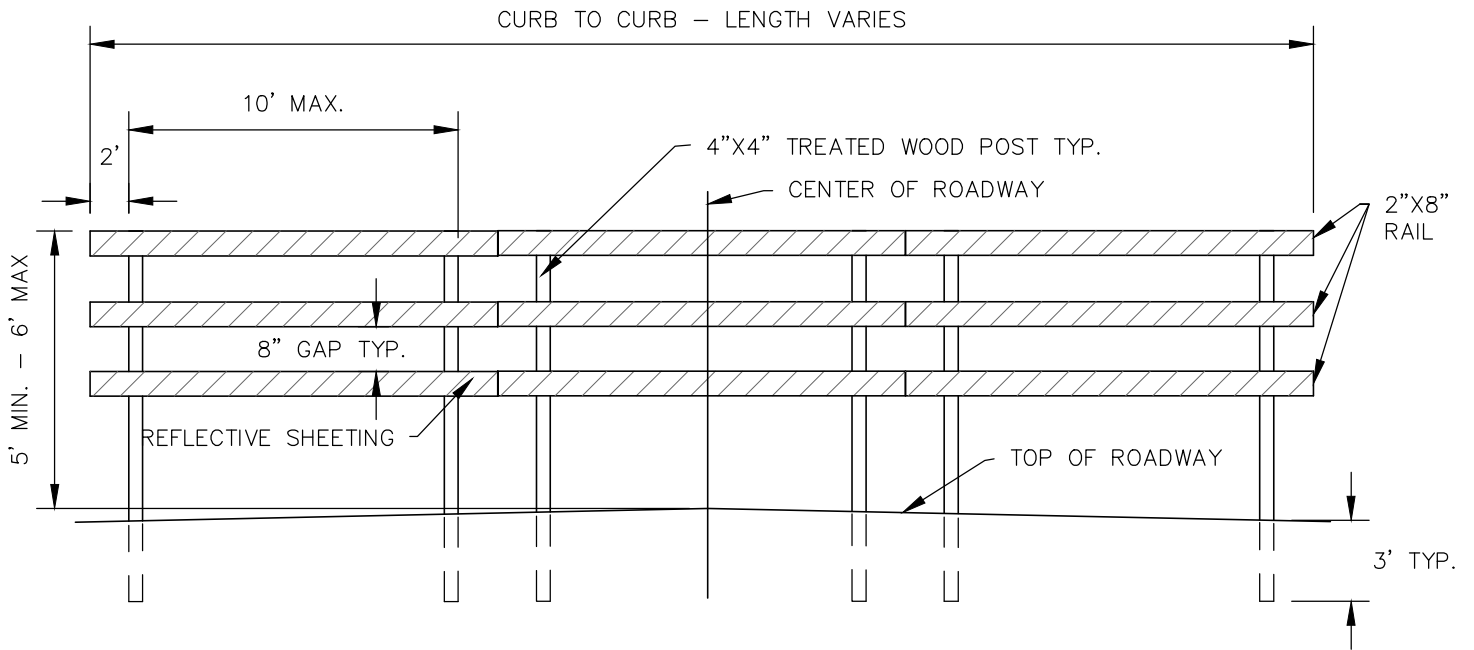
DEEP CELL-PLUG PLANTING DETAILS

2015 Details

City of
BELTON
Missouri

TREE PRESERVATION

SCALE:	NO SCALE	REV.	
DETAIL NO:	MIS-002		
DATE:	03-16-15		



NOTES:

1. TO BE INSTALLED AT ALL ARTERIAL AND COLLECTOR STREET DEAD ENDS.
2. BARRICADE SHOULD BE WITHIN 3' FROM END OF ROADWAY.
3. RAILS SHALL BE PAINTED WHITE ON ALL SIDES.
4. RAILS SHALL BE BOLTED ON POSTS USING 2-1/2"X 6" GALVANIZED CARRIAGE BOLTS AT EACH CONNECTION POINT.
5. SHEETING SHALL BE REFLECTIVE, ENGINEER GRADE (MINIMUM), ALTERNATING RED AND WHITE IN COLOR.
6. PROPER SHEETING STRIPING PATTERN SHALL BE USED – SEE TABLE BELOW
7. INSTALL PROPER SIGN IN ALIGNMENT WITH THE APPROACHING DRIVING LANE, SEE TABLE BELOW.

STRIPING PATTERN AND SIGN TABLE

	USED WHEN THERE IS A STREET OUTLET TO THE RIGHT	SIGN W1-6
	USED WHEN THERE IS A STREET OUTLET TO THE LEFT	SIGN W1-6
	USED WHEN THERE ARE STREET OUTLETS TO THE RIGHT AND LEFT	SIGN W1-7
	USED WHEN THERE ARE NO OUTLETS AVAILABLE	SIGN R11-2

TYPE III END OF ROADWAY BARRICADE

2015 Details



City of
BELTON
Missouri

END OF ROADWAY BARRICADE

SCALE:	NO SCALE	REV.	
DETAIL NO:	MIS-003		
DATE:	03-16-15		