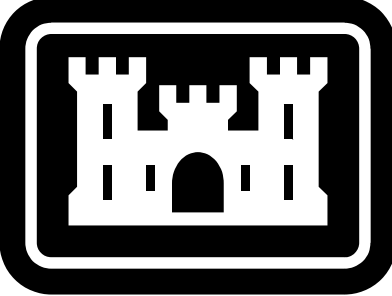


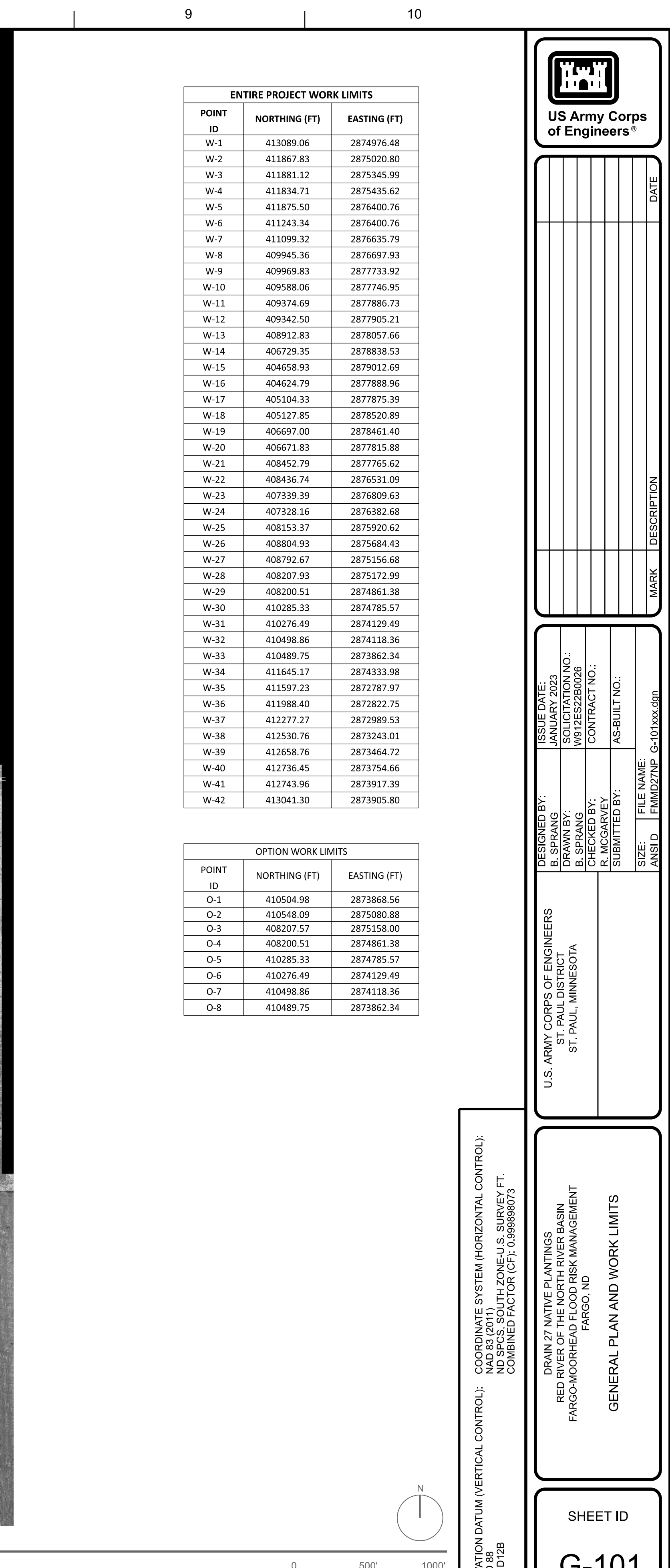
	1	2	3	4	5	6	7	8	9	10
G	<div><div></div><div>US Army Corps of Engineers®</div></div>									
F	<div>DRAIN 27 NATIVE PLANTINGS</div> <div>RED RIVER OF THE NORTH RIVER BASIN</div> <div>FARGO-MOORHEAD FLOOD RISK MANAGEMENT</div> <div>FARGO, ND</div>									
E										
D										
C										
B	<div>SOLICITATION NO.: W912ES22B0026</div> <div>CONTRACT NO.:</div> <div>ISSUE DATE: JANUARY 2023</div>									
A	<div><div><div><div><div>THIS PROJECT WAS DESIGNED BY THE ST. PAUL DISTRICT CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152. SIGNATURES INDICATE OFFICIAL RECOMMENDATION OF ALL DRAWINGS IN THIS SET.</div><div>APPROVED BY:</div></div><div><div>CHIEF</div><div>ENGR &amp; CONST</div><div>DIVISION</div></div></div><div><div>APPROVAL RECOMMENDED BY:</div><div><div>CHIEF</div><div>EC-D</div><div>BRANCH</div></div><div><div>CHIEF</div><div>EC-G</div><div>BRANCH</div></div><div><div>CHIEF</div><div>EC-H</div><div>BRANCH</div></div><div><div>TECHNICAL LEAD</div></div></div></div></div>									
	<div><div><div><div><div>U.S. ARMY CORPS OF ENGINEERS</div><div>ST. PAUL DISTRICT</div><div>ST. PAUL, MINNESOTA</div><div>ST. PAUL DISTRICT</div></div><div><div>DESIGNED BY:</div><div>B. SPRANG</div><div>DRAWN BY:</div><div>D. SPRANG</div><div>CHECKED BY:</div><div>R. MCGARVEY</div><div>SUBMITTED BY:</div><div></div></div><div><div>ISSUE DATE:</div><div>JANUARY 2023</div><div>SOLICITATION NO.:</div><div>W912ES22B0026</div><div>CONTRACT NO.:</div><div></div><div>AS-BUILT NO.:</div><div></div></div><div><div>FILE NAME:</div><div>F:\MMD27NP_G-001xxx.dgn</div><div>ANSID:</div><div></div></div></div><div><div>MARK</div><div>DESCRIPTION</div><div>DATE</div></div></div></div>									
	<div><div><div>DRAIN 27 NATIVE PLANTINGS</div><div>RED RIVER OF THE NORTH RIVER BASIN</div><div>FARGO-MOORHEAD FLOOD RISK MANAGEMENT</div><div>FARGO, ND</div><div>COVER SHEET</div></div><div><div>SHEET ID</div><div>G-001</div></div></div>									









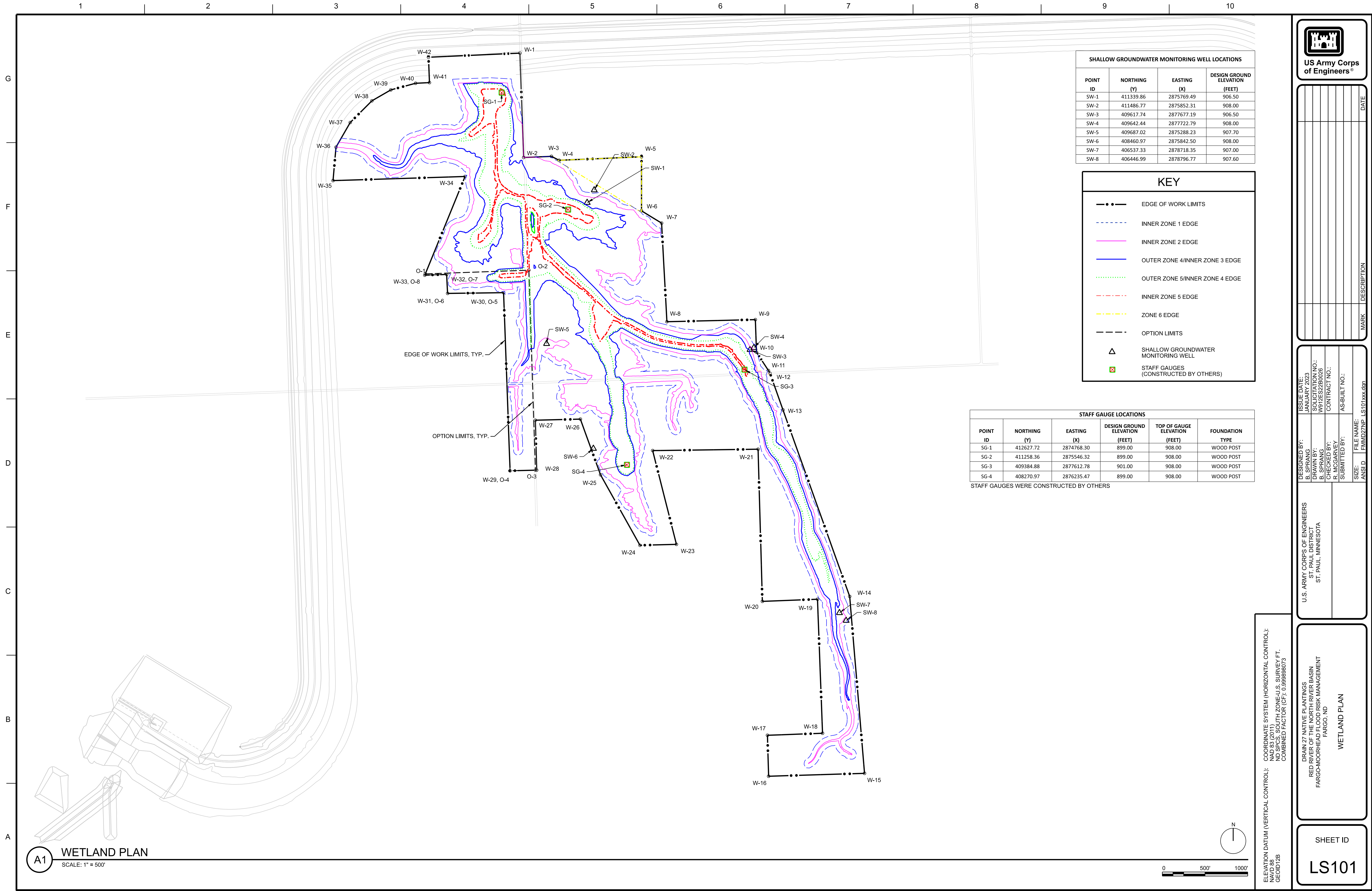


OPTION WORK LIMITS		
POINT ID	NORTHING (FT)	EASTING (FT)
O-1	410504.98	2873868.56
O-2	410548.09	2875080.88
O-3	408207.57	2875158.00
O-4	408200.51	2874861.38
O-5	410285.33	2874785.57
O-6	410276.49	2874129.49
O-7	410498.86	2874118.36
O-8	410489.75	2873862.34

SHEET ID  
**G-101**

ADVERTISEMENT





SHALLOW GROUNDWATER MONITORING WELL LOCATIONS			
POINT ID	NORTHING (Y)	EASTING (X)	DESIGN GROUND ELEVATION (FEET)
SW-1	411339.86	2875769.49	906.50
SW-2	411486.77	2875852.31	908.00
SW-3	409617.74	2877677.19	906.50
SW-4	409642.44	2877722.79	908.00
SW-5	409687.02	2875288.23	907.70
SW-6	408460.97	2875842.50	908.00
SW-7	406537.33	2878718.35	907.00
SW-8	406446.99	2878796.77	907.60

KEY	
— • • —	EDGE OF WORK LIMITS
- - - - -	INNER ZONE 1 EDGE
— — — — —	INNER ZONE 2 EDGE
— — — — —	OUTER ZONE 4/INNER ZONE 3 EDGE
- · - · - ·	OUTER ZONE 5/INNER ZONE 4 EDGE
- · - · - ·	INNER ZONE 5 EDGE
- · - · - ·	ZONE 6 EDGE
- - - - -	OPTION LIMITS
Δ	SHALLOW GROUNDWATER MONITORING WELL
☒	STAFF GAUGES (CONSTRUCTED BY OTHERS)

STAFF GAUGE LOCATIONS					
POINT ID	NORTHING (Y)	EASTING (X)	DESIGN GROUND ELEVATION (FEET)	TOP OF GAUGE ELEVATION (FEET)	FOUNDATION TYPE
SG-1	412627.72	2874768.30	899.00	908.00	WOOD POST
SG-2	411258.36	2875546.32	899.00	908.00	WOOD POST
SG-3	409384.88	2877612.78	901.00	908.00	WOOD POST
SG-4	408270.97	2876235.47	899.00	908.00	WOOD POST

STAFF GAUGES WERE CONSTRUCTED BY OTHERS

US Army Corps of Engineers®

ISSUE DATE: JANUARY 2023	PROJECT NO.: W01P027B002	CONTRACT NO.:	AS-BUILT NO.:
DESIGNED BY: B. SPRANG	DRAWN BY: W01P027B002	CHECKED BY: R. MCGARVEY	SUBMITTED BY:
U.S. ARMY CORPS OF ENGINEERS ST. PAUL DISTRICT ST. PAUL, MINNESOTA		FILE NAME: ANSID: FMMD27NP_LS101xxx.dgn	

COORDINATE SYSTEM (HORIZONTAL CONTROL):  
NAD 83 (2011)  
NAD 83 SOUTH ZONE-U.S. SURVEY FT.  
COMBINED FACTOR (CF): 0.99996073

ELEVATION DATUM (VERTICAL CONTROL):  
NAVD 88  
GEOID 12B

DRAIN 27 NATIVE PLANTINGS  
RED RIVER OF THE NORTH RIVER BASIN  
FARGO-MOORHEAD FLOOD RISK MANAGEMENT  
FARGO, ND

WETLAND PLAN

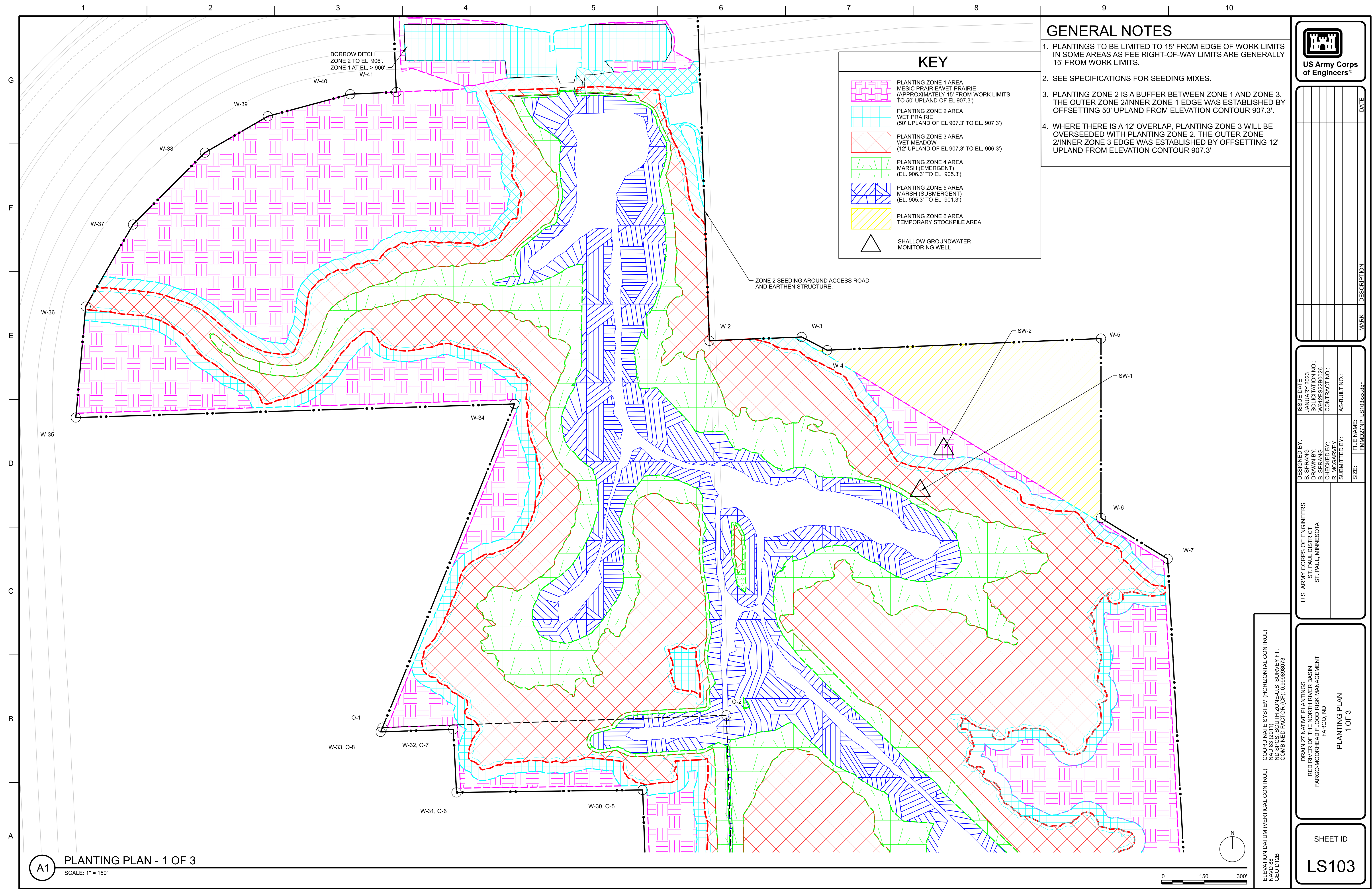
SHEET ID

LS101

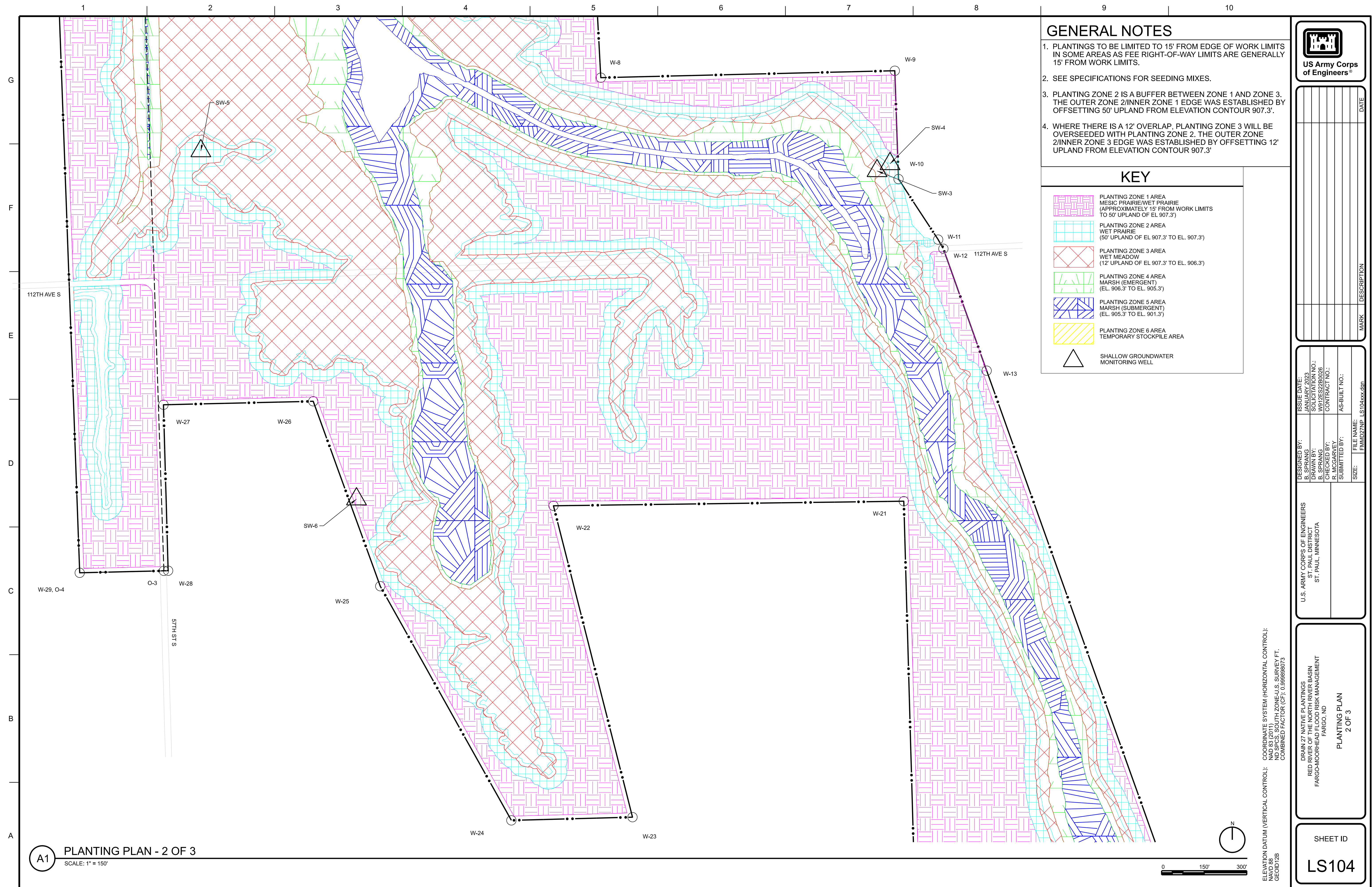








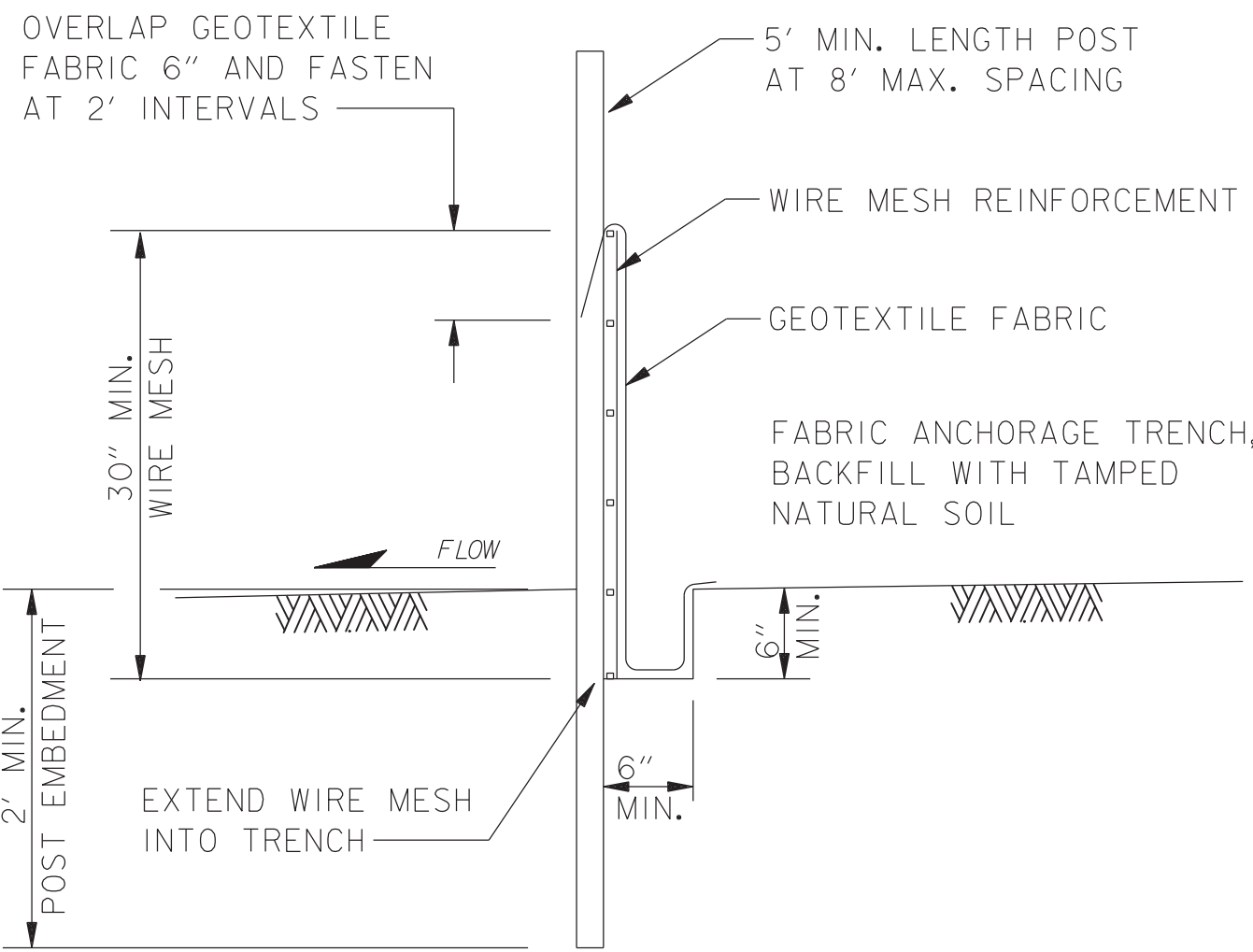






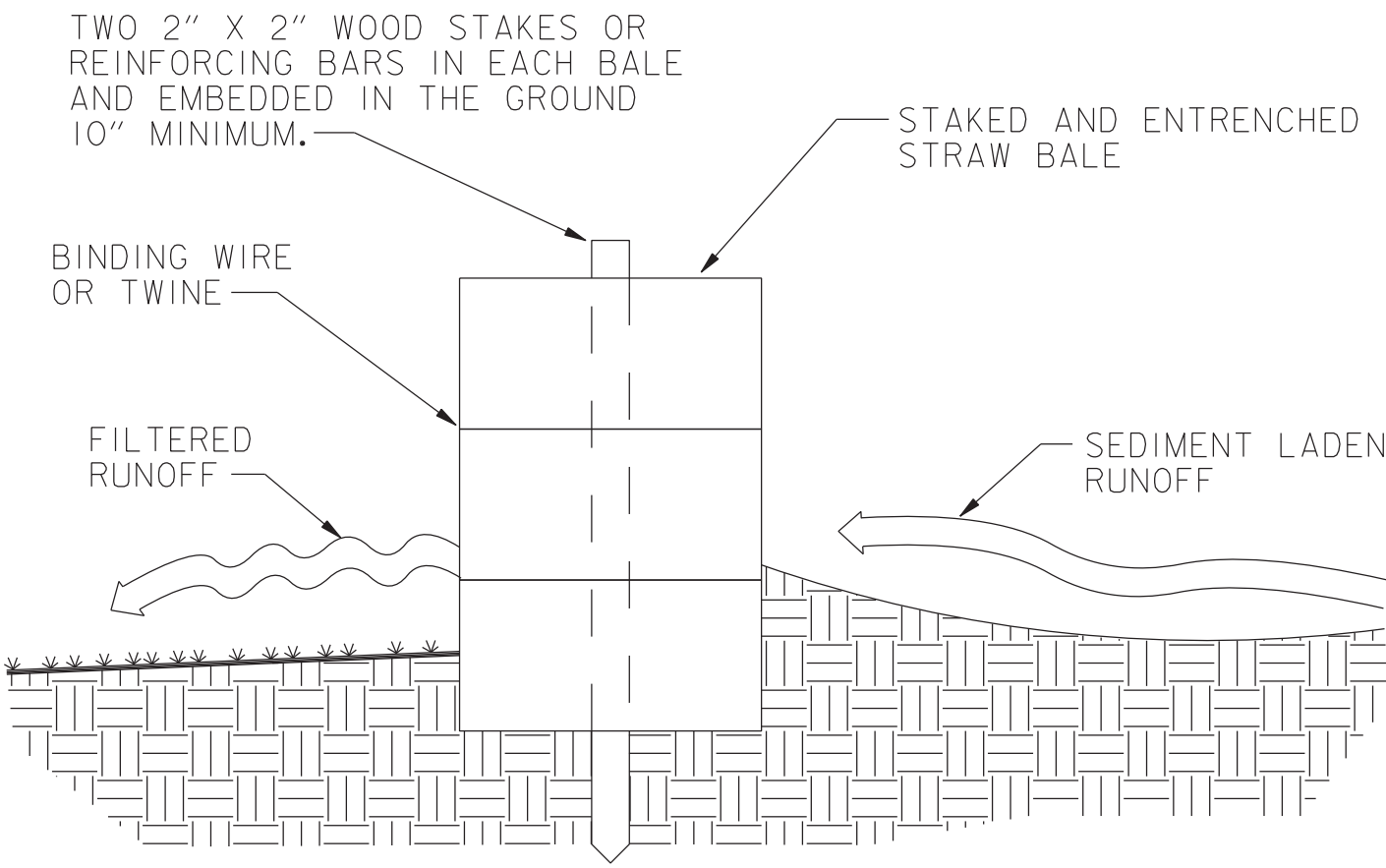






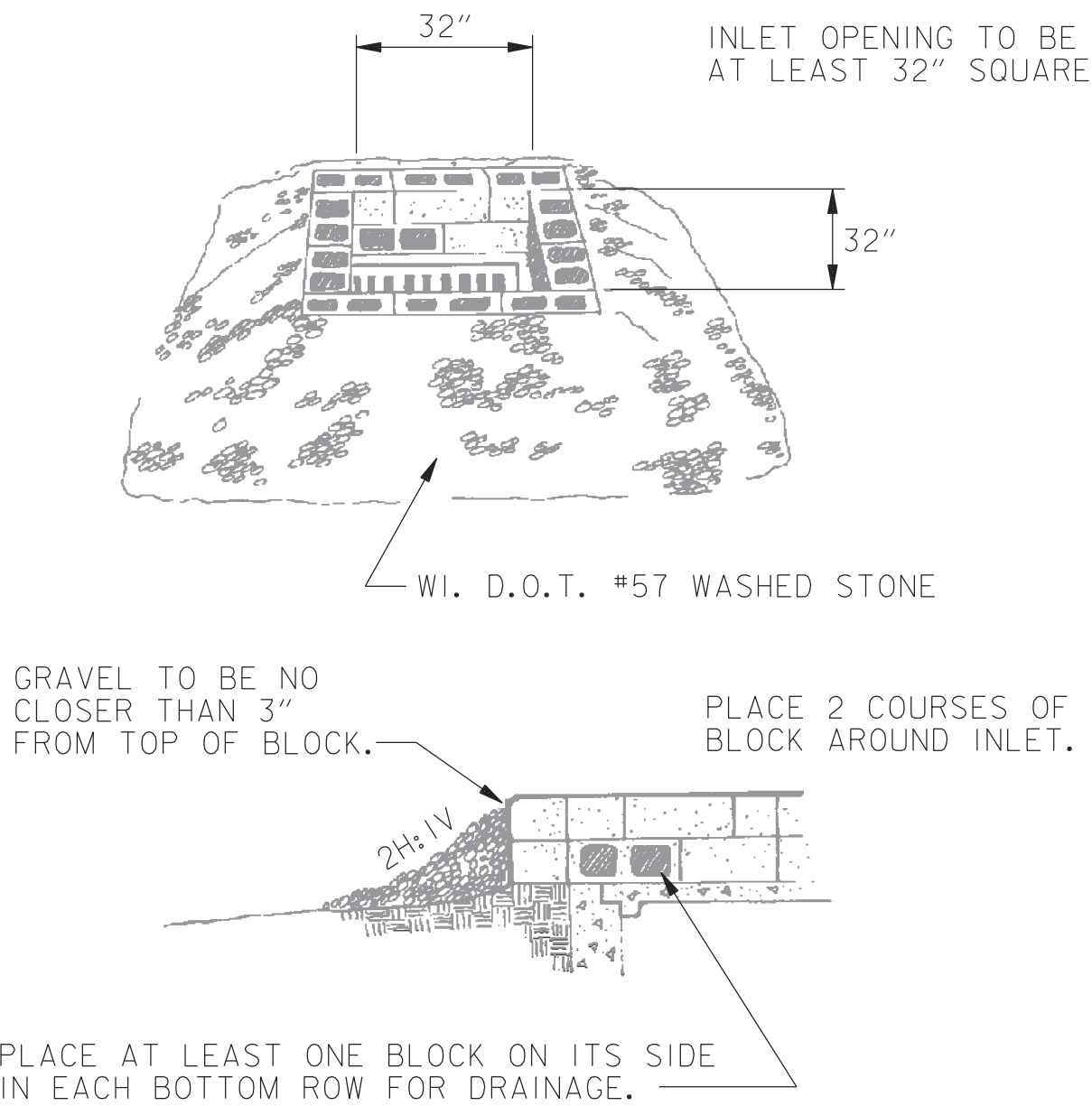
PERIMETER SEDIMENT CONTROL

SILT FENCE SHOULD BE INSTALLED PRIOR TO MAJOR SOIL DISTURBANCE IN THE DRAINAGE AREA. SILT FENCE SHOULD BE PLACED AT THE BOTTOM OF A SLOPE OR MINOR DRAINAGEWAY, PERPENDICULAR TO THE DIRECTION OF WATER FLOW. IT CAN ALSO BE PLACED AT THE PERIMETER OF THE WORK AREA.



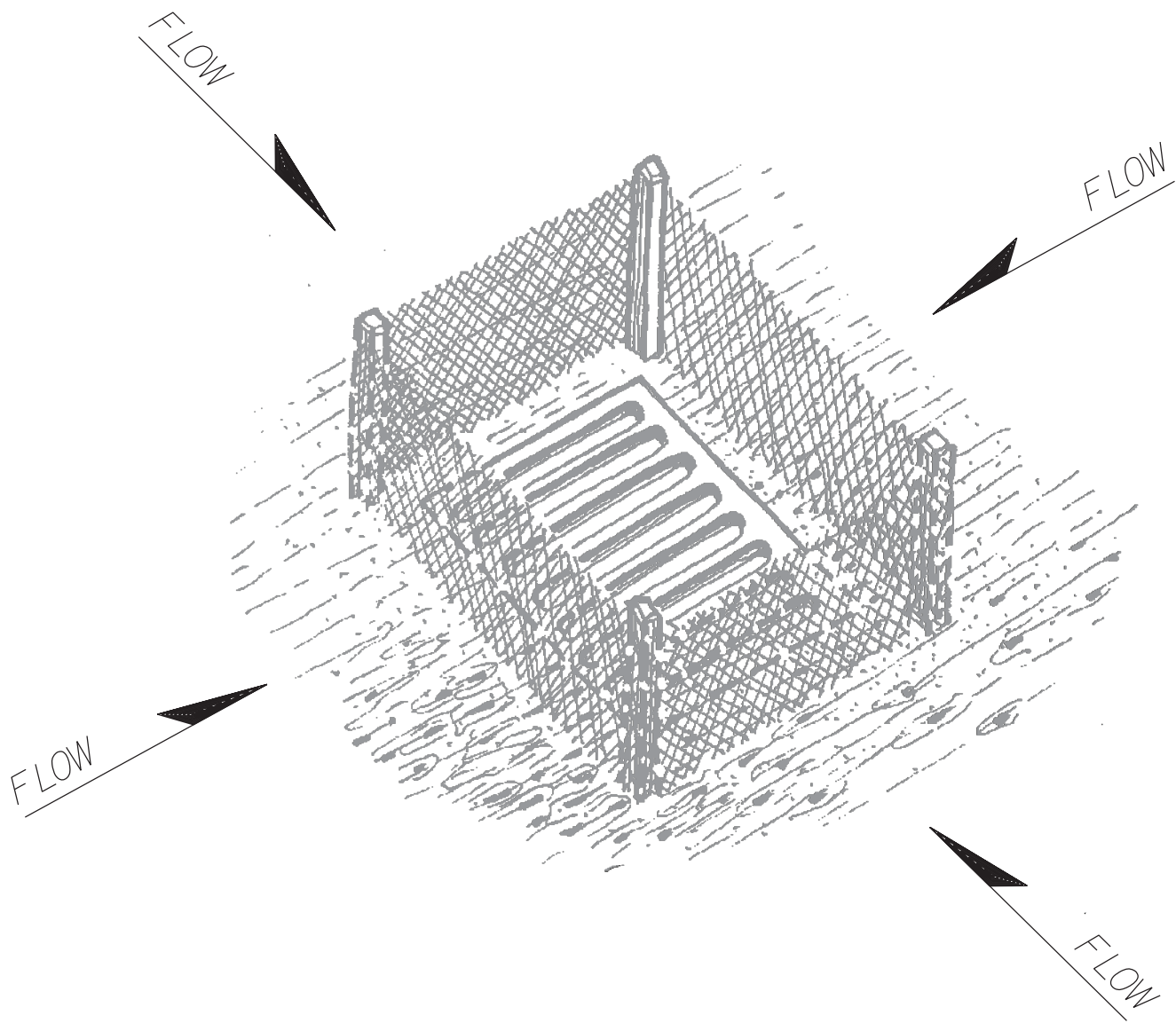
DRAINAGEWAY RUNOFF CONTROL

STRAW BAIL BARRIERS SHOULD BE INSTALLED PRIOR TO MAJOR SOIL DISTURBANCE IN THE DRAINAGE AREA. THE BARRIERS SHOULD BE PLACED PERPENDICULAR TO THE FLOW, ACROSS THE BOTTOM OF A SLOPE OR MINOR DRAINAGEWAY. IT CAN ALSO BE USED AT THE PERIMETER OF THE WORK AREA. THE BAILS MUST BE FIRMLY STAKED AND PLACED END TO END. THERE CAN BE NO GAPS BETWEEN THE BAILS.



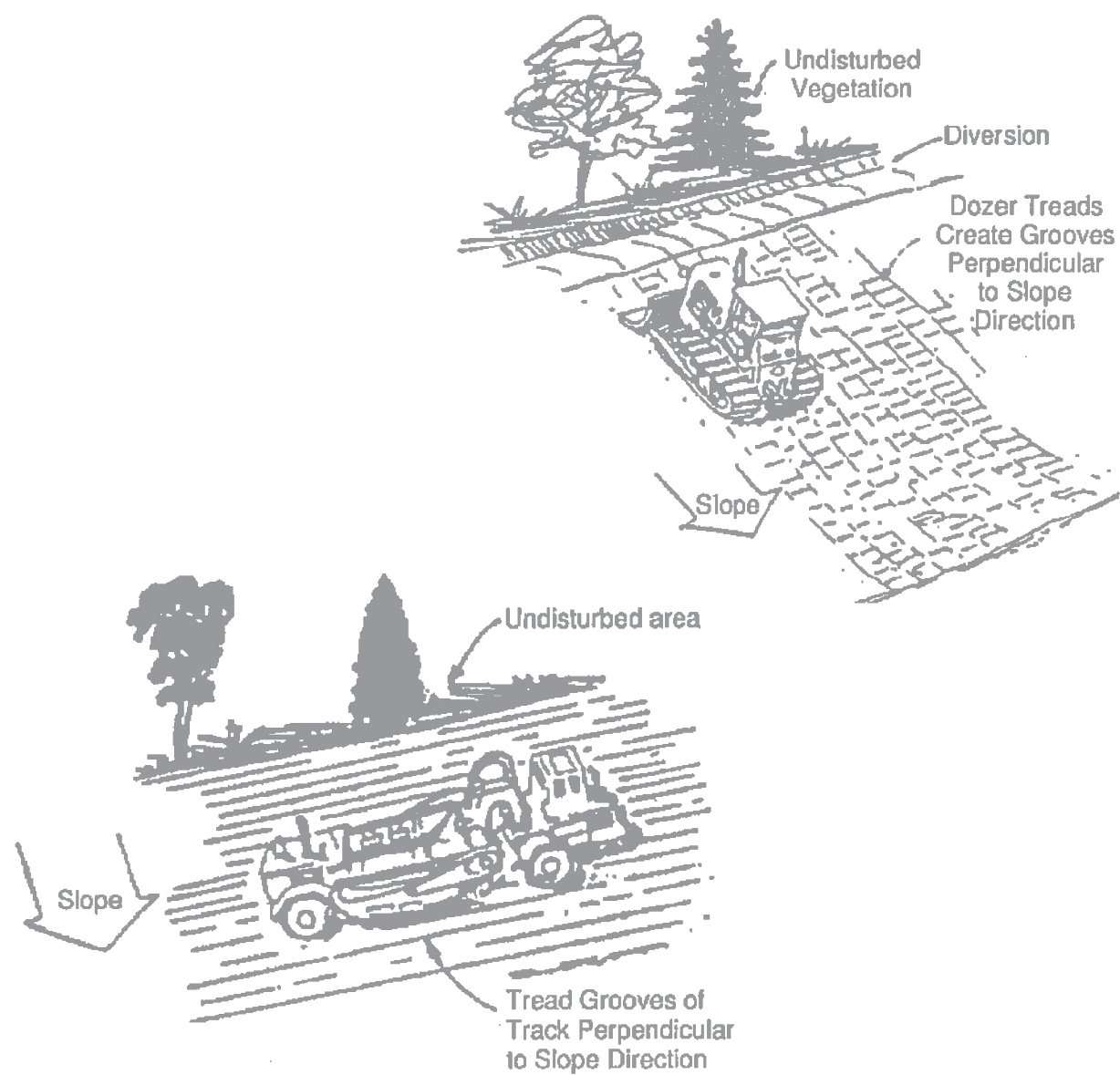
BLOCK AND GRAVEL INLET PROTECTION

STORM DRAIN INLETS CAN BE PROTECTED FROM SEDIMENT LADEN RUNOFF USING A DRY BLOCK AND GRAVEL FILTER. LAY CONCRETE BLOCKS ON FIRM, SMOOTH FOUNDATION EXCAVATED BELOW STORM DRAIN TOP. PLACE AT LEAST ONE CONCRETE BLOCK ON ITS SIDE IN EACH BOTTOM ROW. PLACE WIRE MESH WITH 1/2" OPENINGS OVER ALL BLOCK OPENINGS USED FOR DRAINAGE.



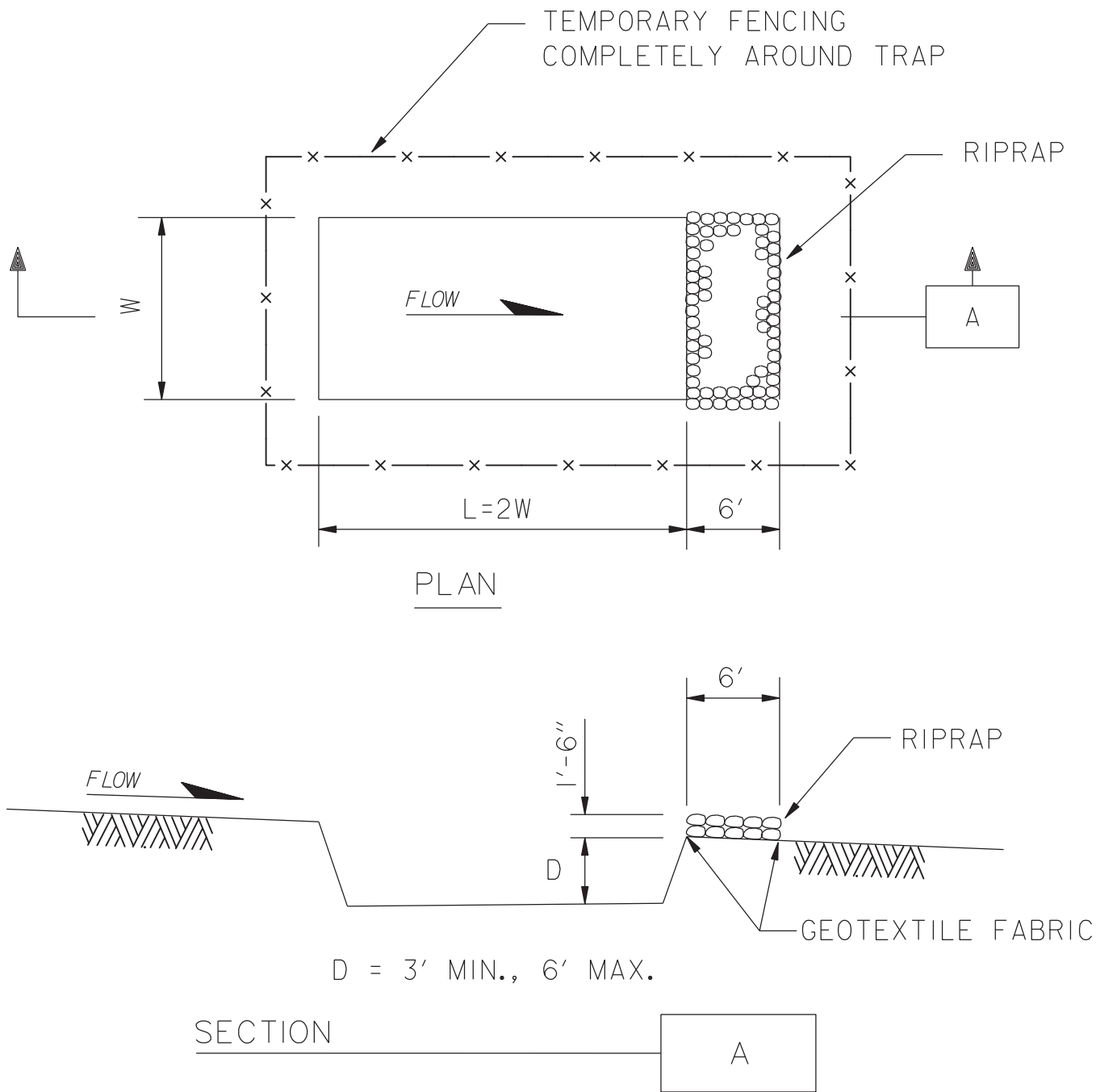
STORM SEWER INLET CONTROL

STORM DRAIN INLETS SHALL BE PROTECTED FROM SEDIMENT LADEN RUNOFF UNTIL SOIL IN THE DRAINAGE AREA IS STABILIZED. SILT FENCE (SEE PERIMETER SEDIMENT CONTROL), STRAW BAIL BARRIERS (SEE DRAINAGEWAY RUNOFF CONTROL) OR CONCRETE BLOCK WITH GRAVEL FILTER (SEE BLOCK AND GRAVEL INLET PROTECTION) MAY BE USED.



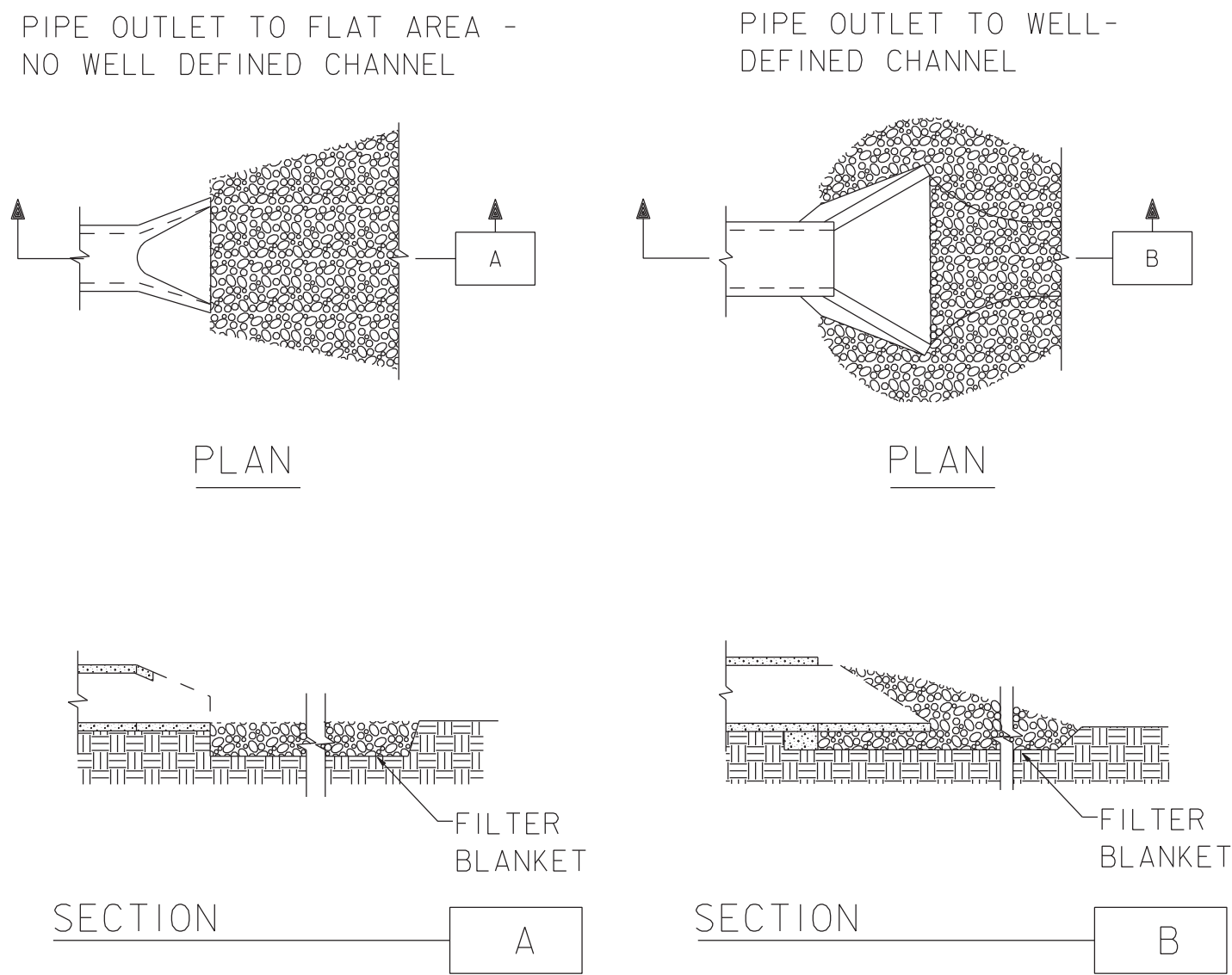
HORIZONTAL SLOPE GRADING

SURFACE ROUGHENING, USING HEAVY EQUIPMENT TO CREATE GROOVES IN THE SOIL PERPENDICULAR TO THE DIRECTION OF WATER FLOW, IS APPROPRIATE FOR SLOPES OF 3:1 OR FLATTER. IT SHOULD BE DONE AS SOON AS POSSIBLE AFTER THE VEGETATION HAS BEEN REMOVED FROM THE SLOPE. SLOPES STEEPER THAN 3:1 BUT LESS THAN 2:1 SHOULD BE GROOVED WITH DISKS OR SPRING HARROWS. STEEPER SLOPES SHOULD BE STAIR-STEPPED.



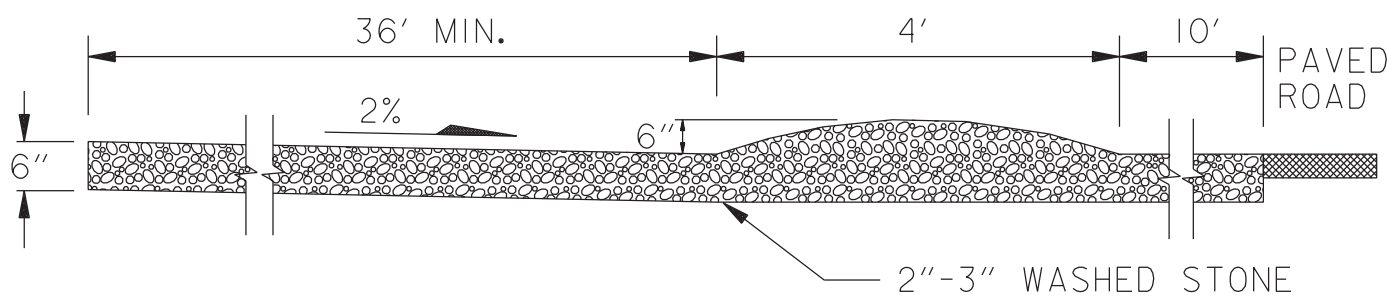
TEMPORARY SEDIMENT TRAP

TEMPORARY SEDIMENT TRAPS CAN BE CONSTRUCTED EITHER BY EXCAVATION OR BY PLACING AN EMBANKMENT ACROSS A DRAINAGEWAY. THE SEDIMENT BASIN SHOULD BE DESIGNED WITH SUFFICIENT DETENTION TIME FOR SEDIMENT TO SETTLE OUT OF THE STORM WATER.




STORM SEWER PIPE OUTLET ENERGY DISSIPATION

ALL STORM SEWER PIPE OUTLETS SHALL HAVE RIPRAP APRONS, DESIGNED TO PREVENT SCOUR.



STABILIZED VEHICLE ENTRANCE

STABILIZED VEHICLE ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. SHOULD MUD BE TRACKED OR WASHED ONTO THE PAVED ROAD, IT MUST BE REMOVED IMMEDIATELY. ENTRANCE SHALL BE SLOPED TO DIVERT RUNOFF TO A SEDIMENT TRAP OR CONTROLLED STORM SEWER INLET.

SYMBOL	DESCRIPTION		DATE      APPROVAL
			<b>US Army Corps of Engineers</b> St. Paul District
AE APPROVING OFFICIAL:		REFERENCE DRAWING NPDES/EROSION CONTROL STANDARD PLATES - DESIGN/CIVIL DISTRICT OFFICE      ST. PAUL, MINNESOTA  BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL	
PE-D  PE-H	DESIGNED:		
	CHECKED:		
	DRAWN:      JIVL		
DESIGNED:			
CHECKED:			
DATE: 02-04-94	CAD FILE NAME:    stgip000.dgn		
	SOL. NO:	22 - 22	OF