EROSION CONTROL NOTES

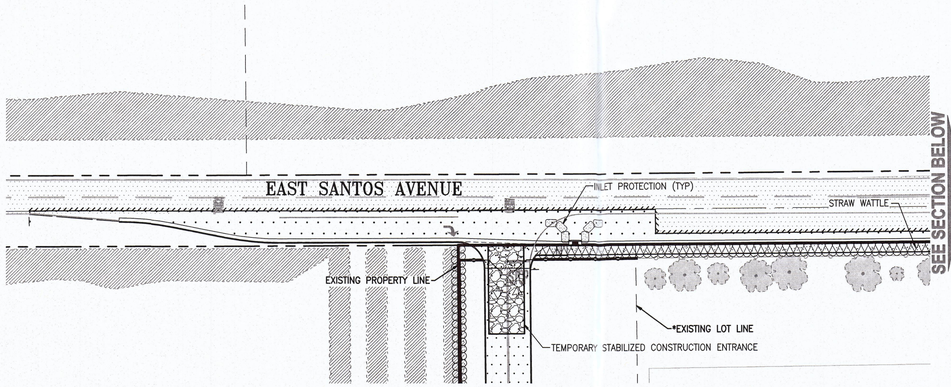
1. THESE PLANS DEPICT APPROPRIATE MEASURES TO CONTROL EROSION ON THE SITE TO BE GRADED AS SHOWN ON THE PLANS THE NATIVE VEGETATION WILL BE REMOVED ONLY FROM THOSE AREAS TO BE GRADED. AREAS OUTSIDE OF AND DOWNSLOPE OF THE LIMITS OF GRADING WILL BE PROTECTED FROM SILT LADEN RUNOFF BY PERIMETER SILT FENCES AS DEPICTED ON THIS PLAN. SLOPED AREAS WHICH HAVE BEEN STRIPPED OF VEGETATION AND NEW SLOPES OVER FOUR FEET HIGH CREATED DURING THE GRADING OPERATION WILL BE TRACKWALKED & HYDROSEEDED.
2. ALL EROSION SEDIMENT STRUCTURES SHALL BE INSPECTED AFTER EACH RAINSTORM AND SHALL BE CLEANED OUT AS NECESSARY.
3. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. THE LOCATION IS SHOWN ON THESE PLANS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE ENTRANCE.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF EROSION CONTROL FOR THE LIFE OF THE PROJECT AND SHALL INITALL AND MAINTAIN ANY DEVICES AND MEASURES NECESSARY TO THE SATISFACTION OF THE STORMWATER CONSTRUCTION INSPECTOR, DURING CONSTRUCTION ACTIVITIES.
5. TO MINIMIZE EROSION OF GRADED BANKS, ALL GRADED BANKS AND STOCKPILE AREAS SHALL BE HYDROSEEDED, LANDSCAPED OR SEALED.
6. STRAW BALES, PIECES OF WOOD, FABRIC OR OTHER SUITABLE MATERIALS SHALL BE USED TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING ANY COMPLETED STORM DRAIN INLETS. THESE PROTECTION MEASURES SHALL BE MAINTAINED UNTIL THE PROJECT IS COMPLETED.
7. WHEN TEMPORARY STRUCTURES HAVE SERVED THEIR INTENDED PURPOSE AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. THE EMBANKMENT AND RESULTING SEDIMENT DEPOSITS ARE TO BE LEVELED OR OTHERWISE DISPOSED OF BY THE CONTRACTOR AS RECOMMENDED BY THE SOILS ENGINEER.
8. GRADED AREAS MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE SHALL BE DIRECTED TOWARDS DRAINAGE INLETS.
9. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THIS PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS AND WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
10. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS BY THE END OF EACH WORKING DAY AS DIRECTED BY THE INSPECTOR.
11. HYDROMULCHING OF SLOPES OVER 5' IN HEIGHT SHALL BE COMPLETED BETWEEN SEPTEMBER 1 AND OCTOBER 1 OF THE YEAR IN WHICH THEY ARE CONSTRUCTED OR IMMEDIATELY AFTER THEIR CONSTRUCTION IF THEY ARE COMPLETED AFTER OCTOBER 1ST. APPLICATION RATES SHALL BE AS FOLLOWS AS REQUIRED BY SAN JOAQUIN COUNTY:

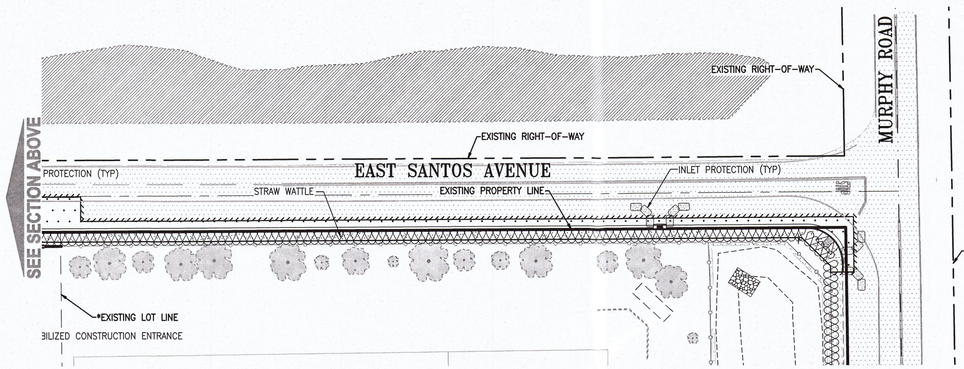
HYDROSEED MIX: BOTANICAL NAME	(COMMON NAME)	MIN. % PURITY	MIN. % GERMINATION	LB/ACRE
ARISTIDA TERNIPES VAR. HAMULOSA	(THREE-AWN)	90%	85%	2
BROMUS CARINATUS	(CALIFORNIA BROME)	90%	85%	2
ELYMUS GLAUCUS	(BLUE WILD RYE)	90%	85%	4
ELYMUS TRACHYCAULUS SSP. TRACHYCAULUS	(SLENDER WHEATGRASS)	90%	85%	3
MELICA CALIFORNICA	(CALIFORNIA ONION GRASS)	90%	85%	2
MUHLENBERGIA RIGENS	(DEER GRASS)	90%	85%	4
NASSELLA LEPIDA	(FOOTHILL NEEDLEGRASS)	90%	85%	6
TRIFOLIUM HIRTUM	('HYKON' ROSE CLOVER)	90%	85%	10
CELLULOSE FIBER MULCH				2000
ORGANIC BINDER WITH HYDROSEED SLURRY				50
16-20-0-S FERTILIZER				300

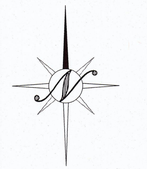
12. WHEN DIRECTED BY THE INSPECTOR, A 12-INCH BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS.
13. STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
14. SEWER OR STORM DRAIN TRENCHES THAT DRAIN THROUGH BASIN DIKES SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE.
15. ALL UTILITY TRENCHES SHALL BE BLOCKED WHEN DIRECTED BY THE DESIGN ENGINEER AT THE PRESCRIBED INTERVALS FROM THE BOTTOM TO TOP WITH DOUBLE ROW OF SANDBAGS PRIOR TO BACKFILL. SANDBAGS ARE TO BE PLACED WITH ALTERNATE HEADER AND STRETCHER COURSES. THE INTERVALS PRESCRIBED BETWEEN SANDBAG BLOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE, BUT NOT TO EXCEED THE FOLLOWING:

GRADE OF GROUND SURFACE OR STREET	INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

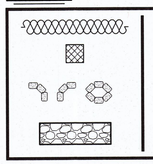
16. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT THE INTERVALS INDICATED ABOVE. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF SANDBAGS, TIMBER, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE INSPECTOR, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTH DIKES MAY NOT BE USED AS VELOCITY CHECK DAMS.
17. AFTER SEWER AND UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS-FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET. REMOVE ALL CHECK DAMS PRIOR TO BACKFILL.
18. TO CONTROL SEDIMENT ENTERING FIELD INLETS, PLACE TWO STRAW BALES IN THE CONCRETE V-DITCH AT THE SIDE OPENING OF THE FIELD INLET AT THE LOCATIONS SHOWN ON THIS PLAN.
19. EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN SHALL BE IN PLACE THROUGHOUT THE DURATION OF THE PROJECT OR WHEN DIRECTED BY THE INSPECTOR.
20. ALL BASINS AND CHECK DAMS SHALL HAVE BEEN PUMPED DRY, AND ALL DEBRIS AND SILT REMOVED WITHIN 24 HOURS AFTER EACH STORM.
21. SANDBAGS SHALL BE STOCKPILED ON-SITE, READY TO BE PLACED IN POSITION WHEN RAIN FORECAST IS 40
22. EXPOSED SLOPES SHALL BE PROTECTED BY VEGETATION COVER OR FABRIC COVER AS APPROVED BY THE COUNTY ENGINEER.
23. WHEN PAD ELEVATION OF ADJACENT LOTS OR ELEVATION BETWEEN STREET AND LOT ARE SEPARATED BY MORE THAN 6 FEET, A MINIMUM 12" BERM SHALL BE MAINTAINED ALONG THE PROPERTY LINE SEPARATING THE LOTS, AND THE BERM SHALL DIRECT THE WATER TO THE OUTLET. VELOCITY CHECK DAMS SHALL BE INSTALLED BETWEEN THE OUTLET ON THE LOT AND THE STREET.
24. ALL EROSION CONTROL MEASURES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE CASQA BMP HANDBOOK FOR CONSTRUCTION.
25. ALL FINISHED PADS SHALL BE PROTECTED.
26. THE FOLLOWING PLANS ARE ACCURATE FOR EROSION CONTROL PURPOSES ONLY.
27. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO COMPLY WITH THE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THIS PLAN.
28. NO ONSITE FUELING SHALL TAKE PLACE.
29. SEAL OR SKIRT BETWEEN TRAILER & GRADING TO PREVENT EXPOSURE TO DRAIN.
30. STRAW WATTLES INSTALLED ON A SLOPE SHALL CONFORM TO THE GUIDELINES SPECIFIED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM BEST MANAGEMENT PRACTICES.
31. EROSION RESISTANT VEGETATION SHOULD BE MAINTAINED ON THE FACE OF ALL SLOPES.
32. CONTRACTOR SHALL REFER TO THE PROJECT STORM WATER POLLUTION PLAN (SWPPP) FOR ALL PRE AND POST CONSTRUCTION EROSION CONTROL MEASURES AND BEST MANAGEMENT PRACTICES (BMPs).
33. ALL BASINS SHALL BE HYDROSEEDED IN ACCORDANCE TO THE PROJECT SWPPP.
34. CONTRACTOR SHALL INSTALL DRAIN INLET PROTECTION FOR ALL CATCH BASINS LOCATED IN THE VICINITY OF WORK. THIS INCLUDES ANY ON-SITE CATCH BASINS LOCATED IN THE PARKING LOT.
35. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION ACTIVITIES DO NOT DEPOSIT SEDIMENT ONTO THE PARKING LOT.
36. CONTRACTOR SHALL USE STREET SWEEPING OR OTHER DRY SWEEPING METHOD, AS NECESSARY, TO REMOVE CONSTRUCTION-RELATED SEDIMENT FROM PAVEMENT IN THE PROJECT AREA PARKING LOT.
37. CONTRACTOR SHALL SCHEDULE WORK FOR DRY-WEATHER DAYS WHEN NO RAIN IS IN THE IMMEDIATE FORECAST.







LEGEND

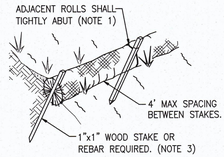


STRAW WATTLE (SEE DETAIL "B")

CONCRETE WASHOUT AREA (SEE DETAIL "F")

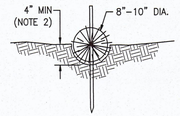
INLET PROTECTION (SEE DETAILS "C", "D", AND "E") SHALL BE PLACED AROUND ALL CATCH BASINS WITHIN THE PROJECT DRAINAGE LIMITS; INCLUDING BUT NOT LIMITED TO ALL LANDSCAPE DRAINAGE. ALSO, INLET PROTECTION SHALL BE PLACED AT THE FIRST INLET DOWNSTREAM FROM THE PROJECT SITE (ON EITHER DIRECTION).

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE (SEE DETAIL "A") TO BE DETERMINED BY CONTRACTOR IN FIELD.



STRAW WATTLE DIKE CONSTRUCTION SPECIFICATIONS:

1. WATTLES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. EACH WATTLE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES.
3. WATTLES SHALL BE SECURELY ANCHORED IN PLACE BY TWO STAKES OR REBARS DRIVEN THROUGH THE WATTLES. THE FIRST STAKE IN EACH WATTLE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID WATTLE TO FORCE THE WATTLES TOGETHER.
4. THE DIKE SHALL BE INSPECTED AFTER EACH STORM, AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. THE WATTLES SHALL BE REMOVED ONCE THEY HAVE SERVED THEIR PURPOSE SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



B STRAW WATTLE DETAIL

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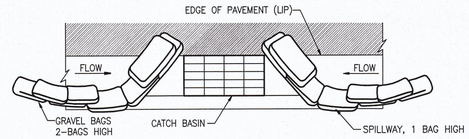

C TYPICAL PROTECTION FOR INLET ON SUMP

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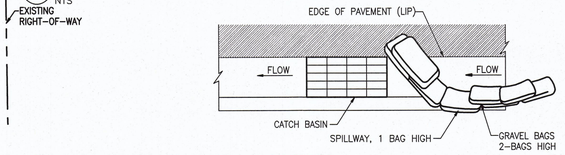


D TYPICAL PROTECTION FOR INLET ON GRADE

NTS

NOTES:

1. INTENDED FOR SHORT-TERM USE.
2. USE TO INHIBIT NON-STORM WATER FLOW.
3. ALLOW FOR PROPER MAINTENANCE AND CLEAN UP.
4. BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
5. NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

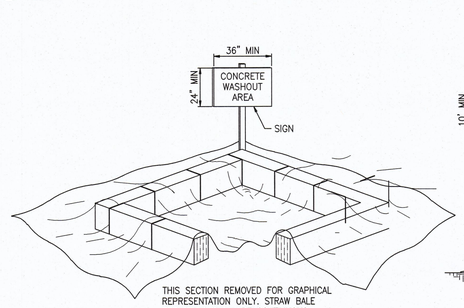
DI PROTECTION TYPE 3 – GRAVEL BAG

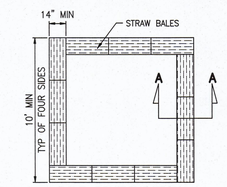
THE GRAVEL BAG BARRIER (TYPE 3) IS SHOWN IN THE FIGURES. FLOW FROM A SEVERE STORM SHOULD NOT OVERTOP THE CURB. IN AREAS OF HIGH CLAY AND SILTS, USE FILTER FABRIC AND GRAVEL AS ADDITIONAL FILTER MEDIA. GRAVEL BAGS SHOULD BE USED DUE TO THEIR HIGH PERMEABILITY.

1. USE SAND BAG MADE OF GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH 0.75 IN. ROCK OR 0.25 IN. PEA GRAVEL.
2. CONSTRUCT ON GENTLY SLOPING STREET.
3. LEAVE ROOM UPSTREAM OF BARRIER FOR WATER TO POND AND SEDIMENT TO SETTLE.
4. PLACE SEVERAL LAYERS OF SAND BAGS – OVERLAPPING THE BAGS AND PACKING THEM TIGHTLY TOGETHER.
5. LEAVE GAP OF ONE BAG ON THE TOP ROW TO SERVE AS A SPILLWAY. FLOW FROM A SEVERE STORM (E.G., 10 YEAR STORM) SHOULD NOT OVERTOP THE CURB.
6. THIS DETAIL IS TO BE USED ON EXISTING STREETS WHERE SILTED FLOW IS TO BE INTERCEPTED (CAUGHT) PRIOR TO ENTERING THE STORM DRAIN SYSTEM. SANDBAGS CAN ALSO BE USED WHEN THE ROUGH GRADED STREETS HAVE POURED INPLACE CONCRETE SURROUNDING THE INLET TO CREATE A "FLOW LINE" WHERE A DAM CAN BE ACHIEVED TO PROTECT THE STORM SYSTEM FROM THE INFLOW OF SEDIMENT.

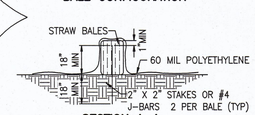
E DI PROTECTION - TYPE 3

NTS





BALE CONFIGURATION



SECTION A-A

NOTES:

1. FACE SIGN TOWARD NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FEET MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.
3. CONTRACTOR SHALL CONDUCT ALL CONCRETE WASHOUT OFF-SITE.
4. WASH OUT SHALL BE CONSTRUCTED PER CASQA BMP MEASURES OR EQUIVALENT.

F DI PROTECTION - TYPE 3

NTS

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE DESIGN AND CONSTRUCTION SPECIFICATIONS:

1. THE TEMPORARY STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OF THE LATEST EDITION OF THE CALIFORNIA STORMWATER HANDBOOK, DETAIL TC-1. WHERE THERE IS A DISCREPANCY BETWEEN THIS DETAIL AND THE CALIFORNIA STORMWATER HANDBOOK, THE HANDBOOK SHALL GOVERN.
2. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT EACH ENTRANCE TO THE PROJECT SITE AND SHALL BE CONSTRUCTED ON LEVEL GROUND.
3. THE MATERIAL FOR CONSTRUCTION OF THE PAD SHALL BE 3 TO 6 INCH DIA. STONE.
4. THE THICKNESS FOR THE PAD SHALL NOT BE LESS THAN 12 INCHES OR AS RECOMMENDED BY SOILS ENGINEER.
5. THE WIDTH OF THE PAD SHALL NOT BE LESS THAN 30' OR THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, WHICHEVER IS GREATER.
6. THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 50 FEET.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY.
8. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP, SEDIMENT BASIN, OR SEDIMENT SWALE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF GRAVEL BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
9. CONTRACTOR TO REMOVE AND DISPOSE OF STABILIZED CONSTRUCTION ENTRANCE UPON COMPLETION OF CONSTRUCTION.
10. CONSTRUCTION AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE 2003 CALIFORNIA STORMWATER BMP HANDBOOK.

A TEMPORARY STABILIZED CONSTRUCTION ENTRANCE

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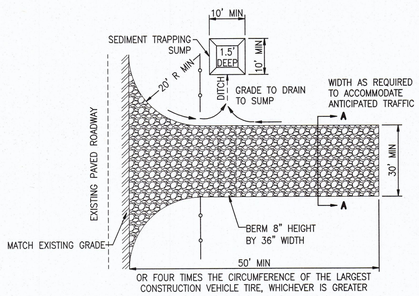
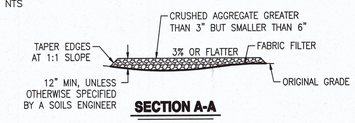


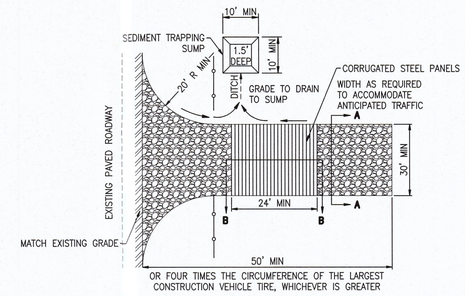
NOTE:
CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO SEDIMENT TRAPPING DEVICE

A1 PLAN (OPTION 1)

NTS



SECTION A-A



NOTE:
CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO SEDIMENT TRAPPING DEVICE

A2 PLAN (OPTION 2)

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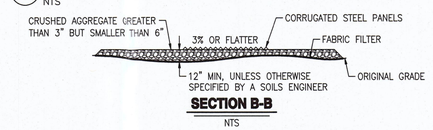

SECTION B-B

NTS

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REVISIONS			
NO.	DESCRIPTIONS	DATE	APPROVED

EROSION CONTROL PLAN, NOTES, AND DETAILS

OFFSITE CIVIL IMPROVEMENT PLANS FOR COLONY OAK K-8 SCHOOL

RIPON, CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
6700 FRANKLIN BLVD., SUITE 120, LODI, CA 95242
(209) 334-7001 Phone (209) 334-7335 Fax

JOB #: 16-1696
DATE: 03/21/2018
SCALE: AS SHOWN
DRAWN: –
DESIGN: –
CHK'D: JPE

SHEET NUMBER

C5.1

PLOTTED: 03/21/2018 11:21 PLOTTED BY: Edgney
DWGNAME: I:\16-1696 Colony Oaks K-8 Civil\Civil\Offsite Plans\C5.1 ERS.dwg