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Construction Sequence and Erosion Control Plan

Drawn By: t.e.g./EMK AES Project No.: 05-0198 (02-527)
Checked: WWS File Name: 020627(esa)20100528_Erosion.dwg
Approved: GDP Date: 05-16-2003

Crystal Creek Realignment Algonquin, Illinois Village of Algonquin 125 Wilbrandt Street Algonquin, Illinois 60102

Revisions:			
No.	By	Date	Description
1		06-30-03	Village Comments
2		12-11-03	Regulatory Comments
3		02-04-04	Village Comments
4		11-30-09	CBBE Comments
5		02-26-10	Final AES review for ACOE submittal
6		05-28-10	ACOE & MCSWCD Comments
7			

Sheet Number
4 of 10

- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, FILTER BAG, OR OTHER APPROPRIATE MEASURE.)
- ALL DISTURBED AREAS AND WORK AREAS MUST BE ISOLATED FROM CREEK FLOWS AT ALL TIMES. THE DIMENSION / ISOLATION OF THE CREEK FLOWS MUST BE CONSTRUCTED FROM NON-ERODIBLE MATERIALS. THE U.S. ARMY CORP OF ENGINEERS MUST BE IN AGREEMENT WITH OVERALL METHOD OF DIVERSION / ISOLATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- DURING WORK ON THE BANKS, SHALERIVER/STREAM/WETLAND WORK MUST BE TIMED TO TAKE PLACE DURING LOW OR NON-FLOW CONDITIONS.
- CONCENTRATED FLOW MUST BE ISOLATED FROM THE WORK AREA USING A NON-ERODIBLE COFFERDAM. EXACT MEANS AND METHODS SHOULD BE DISCUSSED DURING A SCHEDULED PRE-CONSTRUCTION MEETING.
- IF BYPASS IS NECESSARY, THE INLET OF THE HOSE SHALL BE PLACED IN A SUMP PIT AND THE OUTLET FILTER BAG TO BE PLACED ON A FLAT, NON-ERODIBLE, ENERGY DISSIPATING SURFACE PRIOR TO REJOINING THE STREAM FLOW OR WETLAND.
- IF DEWATERING THE CONSTRUCTION AREAS IS NECESSARY, THE CONTRACTOR SHALL FILTER ALL WATER BY USING PUMP PIT, FILTER BAGS, AN INLINE FILTER OR APPROVED ALTERNATE MEASURE. WATER MUST HAVE SEDIMENT REMOVED BEFORE BEING ALLOWED TO DISCHARGE TO THE CREEK/STREAM/WETLAND/RIVER.
- CRITICAL SIDE SLOPES MUST BE RESEEDED AND STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET PRIOR TO BEING EXPOSED TO STREAM FLOW.

CONSTRUCTION SEQUENCE

PRIOR TO COMMENCING CLEARING OR GRADING OPERATIONS

- INSTALL CONSTRUCTION FENCE AROUND TREE PRESERVATION AREAS AND CONSTRUCTION BOUNDARIES.
- INSTALL SILT FENCE ALONG THE TOE OF CHANNEL BANK SLOPES, PROPOSED TEMPORARY STOCKPILE AREAS, AND BRIDGE ABUTMENTS DESIGNATED FOR REMOVAL.
- INSTALL DEWATERING.

STAGE 1

- STREAM ROUTING:
 - CONVEYANCE MAINTAINED IN EXISTING CRYSTAL CREEK CHANNEL. THE UPSTREAM AND DOWNSTREAM CONVEYANCE AREAS WILL BE RESTRICTED TO THE LEFT-HAND (LOOKING UPSTREAM) CHANNEL HALF USING A COFFERDAM.
- CONSTRUCTION:
 - REMOVE EXISTING PEDESTRIAN BRIDGE AND ITS NORTH BRIDGE ABUTMENT. CONSTRUCT ABUTMENTS FOR RELOCATED EAST BRIDGE.
 - CONSTRUCT AND STABILIZE THE ENTIRE CHANNEL LOCATED OUTSIDE OF THE EXISTING CHANNEL LIMITS. EXCAVATE COBBLE AND GRAVEL FROM EXISTING POINT BARS TO PROVIDE THE CHANNEL BED MATERIALS.
 - CONSTRUCT AND STABILIZE THE RIGHT-HAND (LOOKING UPSTREAM) SECTION OF THE CHANNEL AT THE UPSTREAM END OF THE PROJECT.
 - STOCKPILE EXCAVATED MATERIAL BETWEEN THE EXISTING CHANNEL AND THE NEWLY CONSTRUCTED CHANNEL.

EROSION CONTROL:

- STRIP AND STOCKPILE TOPSOIL.
- MAINTAIN SILT FENCE AROUND ALL STOCKPILE AREAS, EXISTING WETLAND AREAS.
- MAINTAIN DEWATERING TO PREVENT STREAM WATER FROM ENTERING THE CONSTRUCTION AREA.
- MAINTAIN A PUMPING PIT AND FILTER BAG TO RECEIVE ALL WATER PUMPED FROM CONSTRUCTION AREA (NO CONSTRUCTION AREA DRAINAGE SHALL BE DISCHARGED DIRECTLY TO CRYSTAL CREEK).

STAGE 2

- STREAM ROUTING:
 - CONVEYANCE MAINTAINED IN RELOCATED CRYSTAL CREEK CHANNEL AND THE RIGHT-HAND (LOOKING UPSTREAM) SECTION OF THE EXISTING CHANNEL AT THE DOWNSTREAM AREA OF THE PROJECT. THE UPSTREAM AREA WILL BE RESTRICTED TO THE RIGHT-HAND (LOOKING UPSTREAM) RELOCATED CHANNEL HALF USING A COFFERDAM.
- CONSTRUCTION:
 - REMOVE SOUTH ABUTMENT OF EXISTING BRIDGE.
 - CONSTRUCT AND STABILIZE THE LEFT-HAND (LOOKING UPSTREAM) SECTION OF THE CHANNEL AT THE UPSTREAM END OF THE PROJECT.
 - CONSTRUCT AND STABILIZE THE LEFT HALF (LOOKING UPSTREAM) OF THE DOWNSTREAM CHANNEL.
 - FILL THE EXISTING CHANNEL WITH THE TEMPORARY STOCKPILE MATERIAL.
- EROSION CONTROL:
 - MAINTAIN SILT FENCE AROUND ALL STOCKPILE AREAS, EXISTING WETLAND AREAS.
 - MAINTAIN DEWATERING TO PREVENT STREAM WATER FROM ENTERING THE CONSTRUCTION AREA.
 - MAINTAIN A PUMPING PIT AND FILTER BAG TO RECEIVE ALL WATER PUMPED FROM CONSTRUCTION AREA (NO CONSTRUCTION AREA DRAINAGE SHALL BE DISCHARGED DIRECTLY TO CRYSTAL CREEK).

EROSION CONTROL AND CONSTRUCTION SEQUENCE PLAN

THE PLAN IS DESIGNED TO: 1) PREVENT THE TRANSPORT OF SOIL AND SUBSOIL FROM GRADED AND DISTURBED AREAS INTO THE EXISTING CHANNEL DURING CONSTRUCTION OF THE NEW CHANNEL AND 2) MAINTAIN FLOW CONVEYANCE OF CRYSTAL CREEK DURING CONSTRUCTION. THE INTENT OF THE PLAN IS TO ALLOW CONSTRUCTION OF THE RELOCATED CHANNEL AND PLACEMENT OF THE EXCAVATED MATERIALS TO REFILL THE EXISTING CHANNEL TO BE DONE UNDER AS DRY A CONDITION AS PRACTICAL. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE-HALF THE EXISTING CHANNEL WIDTH FOR CONVEYANCE PURPOSES DURING ALL STAGES OF CONSTRUCTION. ADDITIONAL PUMP AROUND AND BYPASS TECHNIQUES MAY BE NECESSARY TO ASSIST WITH CONVEYANCE.

CONSTRUCTION IS ANTICIPATED TO BE COMPLETE WITHIN 30 DAYS OF THE PROJECT START DATE. TEMPORARY DIVERSIONS TO CREATE DRYER CONDITIONS FOR GRADING OF POOL STRUCTURES SHALL BE CONSTRUCTED USING A COMBINATION OF COFFERDAMS AND SANDBAGS. THESE SHALL BE IN PLACE PRIOR TO COMMENCING EACH CONSTRUCTION STAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE EXISTING AND/OR NEW CHANNEL AT DAYS END IF ADDITIONAL WORK FOR THAT PHASE IS NEEDED THE NEXT DAY.

EXCAVATED SOIL SHALL BE TEMPORARILY STOCKPILED ON-SITE IN LOCATIONS DESIGNATED FOR DRY SOIL (TOP SOIL), WET SOIL (SAND AND SILT), AND COBBLE/GRAVEL, CHANNEL BED AND BANKS. SILT FENCE SHALL BE INSTALLED AND MAINTAINED AROUND THE STOCKPILES THROUGHOUT THE PROJECT DURATION. ALL EXCAVATION MATERIAL SHALL BE PLACED ON SITE.

EXPOSED SOIL SHALL BE STABILIZED WITH COVER CROP OR PERMANENT SEED MIXES. IF CONSTRUCTION OCCURS MID TO LATE SUMMER, COVER CROP, STRAW MULCH AND/OR EROSION CONTROL BLANKET SHALL BE USED TO STABILIZE EXPOSED SLOPES. SEEDING OF PERMANENT MATRIP SHALL OCCUR AS A DORMANT SEEDING (AFTER NOVEMBER 1) AFTER BLANKET NETTING IS REMOVED AND THE COVER CROP IS MOWED. SILT FENCE SHALL NOT BE REMOVED UNTIL VEGETATIVE COVERAGE ON SEEDS EXCEEDS 90%.

THIS PLAN INCLUDES A SUGGESTED CONSTRUCTION STAGING SEQUENCE. THE CONTRACTOR MAY PRESENT AN ALTERNATIVE METHOD IN WRITTEN AND PLAN FORM WHICH MAY BE USED CONDITIONED UPON WRITTEN ACCEPTANCE BY THE OWNER, ENGINEER, U.S. ARMY CORPS OF ENGINEERS, AND THE MCHENRY COUNTY SOIL AND WATER CONSERVATION DISTRICT.

GENERAL EROSION CONTROL NOTES

- ALL WORK WITH A STREAM IS SUBJECT TO THE RULES AND REGULATIONS OF THE U.S. ARMY CORPS OF ENGINEERS FOR IN-STREAM MODIFICATIONS (404 PERMITS), THE ILLINOIS DNR, AND THE VILLAGE OF ALGONQUIN.
- EROSION CONTROL FOR THIS PROJECT IS A HIGH MAINTENANCE ITEM. DAILY INSPECTION AND MAINTENANCE SHALL BE PERFORMED AS NEEDED TO ENSURE THAT THE TEMPORARY DIVERSION, STREAMS AND STREAMBANKS ARE MAINTAINED AND NOT DAMAGED. MAINTENANCE SHALL INCLUDE REMOVAL AND DISPOSAL OF ANY TRAPPED SEDIMENT OR DEBRIS. DEBRIS WILL BE REMOVED FROM THE SITE. SEDIMENT MAY BE DISPOSED OF IN THE TEMPORARY STOCKPILE AREA.
- SILT FENCE SHALL BE UTILIZED AS THE PRIMARY MEANS FOR PROTECTING THE CONVEYANCE CHANNEL THROUGH ALL PHASES OF THE PROJECT. THE CONTRACTOR SHALL EXPECT THAT ROUTINE REMOVAL OF ACCUMULATED SEDIMENT WILL BE REQUIRED FOR NEARLY ALL PHASES WHERE DREDGING OR EXCAVATING OCCURS. THE CONTRACTOR SHALL USE MACHINERY SUITABLE FOR SEDIMENT REMOVAL IN SHALLOW WATER CONDITIONS.
- ALL TEMPORARY STREAM DIVERSIONS SHALL BE REMOVED WITHIN 1 CALENDAR DAYS AFTER THE DIVERSION IS NO LONGER NEEDED.
- STABILIZED MATS OF AGGREGATE UNDERLIES WITH FILTER FABRIC OR AN APPROPRIATE MEASURE SHALL BE LOCATED AT PUMPING AREAS TO PREVENT LEAKAGE OF FILL MATERIAL (E.G. SAND, THE GRAVEL, ETC.) INTO THE CHANNEL. THESE MATS SHALL BE MAINTAINED AND REPAIRED AS NEEDED.
- THE HEIGHT OF ALL TEMPORARY COFFERDAMS AND SANDBAG LEVEES SHALL BE THE BANKFULL DEPTH.
- ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A DEWATERING BASIN (PUMP PIT) THEN TO A FILTER BAG PRIOR TO RE-ENTERING THE STREAM.
- THE PROCESS OF EXCAVATION AND STABILIZATION SHALL BE A CONTINUOUS (UNINTERRUPTED) OPERATION. ALL MATERIALS SHALL BE ON-SITE ONE DAY PRIOR TO ITS IMPLEMENTATION.
- ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED.

STABILIZED MATS OF AGGREGATE UNDERLIES WITH FILTER FABRIC OR AN APPROPRIATE MEASURE SHALL BE LOCATED AT PUMPING AREAS TO PREVENT LEAKAGE OF FILL MATERIAL (E.G. SAND, THE GRAVEL, ETC.) INTO THE CHANNEL. THESE MATS SHALL BE MAINTAINED AND REPAIRED AS NEEDED.

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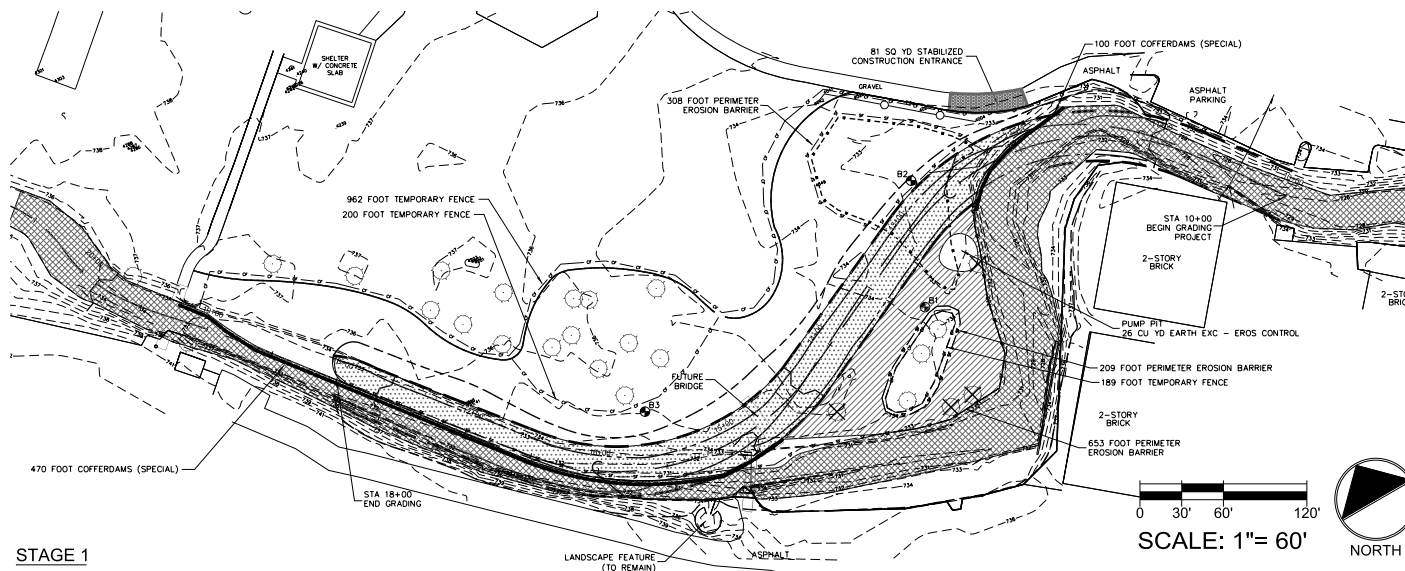
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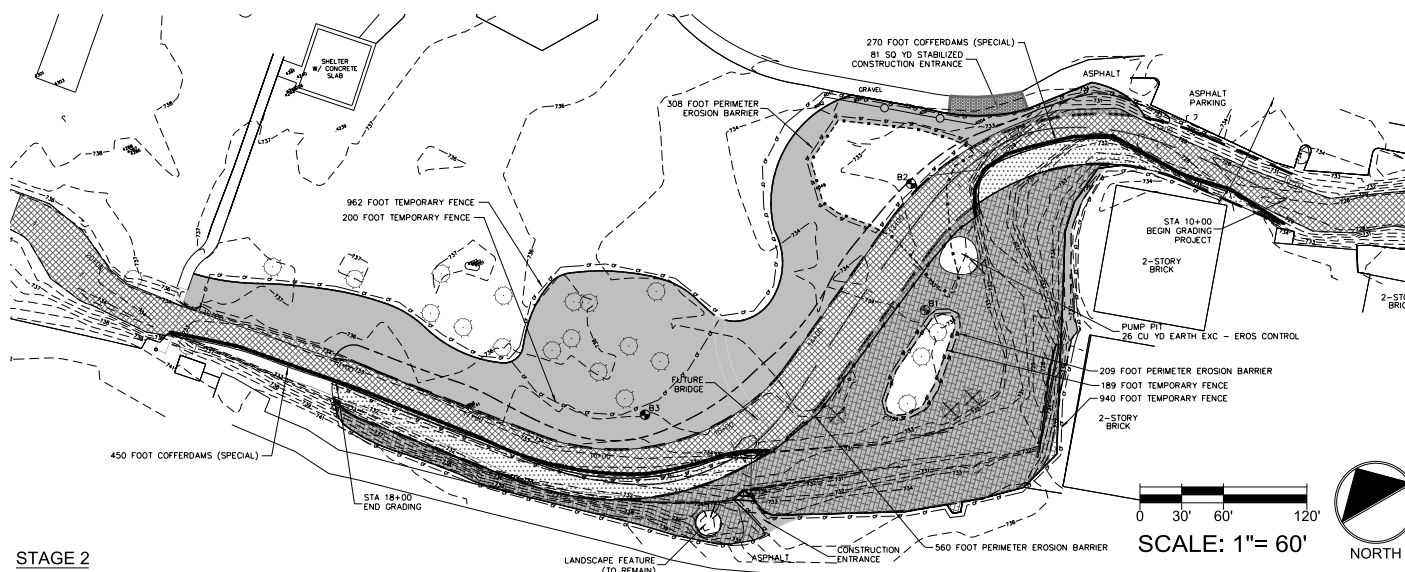
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STAGE 1



STAGE 2

Legend		
Temporary Erosion Control	Existing	Proposed
		CONTOUR ELEVATION
		TREE TO REMAIN
		BANKFULL
		TREE TO BE REMOVED
		WETLAND BOUNDARY
		FENCE
		PERIMETER EROSION BARRIER
		TEMPORARY FENCE
		COFFERDAMS (SPECIAL)
		EROSION CONTROL BLANKET
		LIMIT OF GRADING
		LIMIT OF CONSTRUCTION
		CHANNEL CONSTRUCTION AREA
		STOCKPILE AREA
		STREAM CONVEYANCE AREA
		GRADING AREA

FILE NAME = ...\\D160F72-sht-Towne Park-06.dgn	USER NAME = akw	DESIGNED - AES	REVISED -
		DRAWN - AES	REVISED -
		CHECKED - AES	REVISED -
		DATE - 5/3/2012	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		CRYSTAL CREEK RELOCATION PLANS	
SCALE: AS NOTED	SHEET NO. 4 OF 10 SHEETS	STA.	TO STA.

O.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0003	18A-2	MCHENRY	825	403
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 60F72