NOTES

Bankful width at this site is approximately 6 feet wide based on measurements and observations made above and below crossing site.

Conserve creek bed materials during excavation for pipe and place into installed pipe to mimic natural stream channel bottom. Stockpile materials to approved locations and treat as required in CS-02 Erosion and Pollution Control construction specification. Locate material storage areas such that drainage from these areas will not enter the work isolation zone.

Install pipe arch as specified by the "Corrugated Metal Pipe Design Guide" by CONTECH Construction Products or pipe arch manufacturer's recommendation.

Work area isolation is to be provided using inflatable bags, sandbags, sheet piling, precast concrete panels or other materials as approved.

A temporary bypass shall be installed to divert water around around the work area prior to work in the wetted perimeter of the drainage. A sandbag revetment shall be placed at the upstream and downstream end of the project to divert the entire flow through the bypass and prevent water from backing into the work area.

A list of equipment, materials and work isolation plan shall be submitted for approval prior to implementation. All pumps shall have fish screens.

De-watering shall be performed to provide reasonably dry construction conditions.

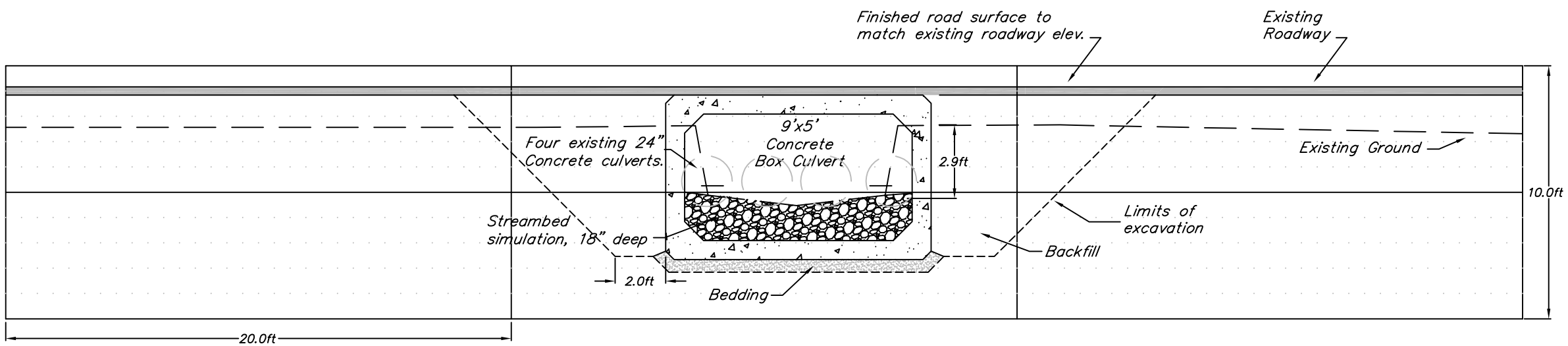
The Contractor shall capture and safely move food fish, game fish, and other fish life from the isolated work site. The Contractor shall have fish capture and transportation equipment ready and on the job site . Captured fish shall be immediately and safely transferred to free-flowing water downstream of the project site.

All damaged or disturbed banks are to restored to a natural slope, pattern and profile suitable for establishment of permanent woody material.

STEVEN KELLY CAHILL
STATE OF WASHINGTON
47400
REGISTERED
PROFESSIONAL ENGINEER

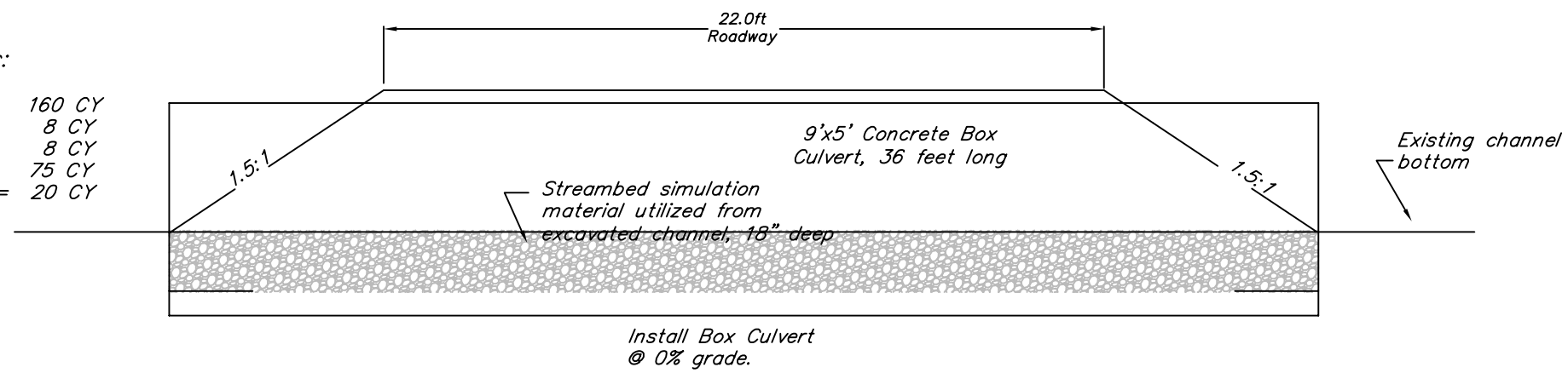
PRELIMINARY

SECTION VIEW



Estimate of Quantities:

Excavated volume =	160 CY
Bedding volume =	8 CY
Backfill volume =	8 CY
Embankment volume =	75 CY
Stream Simulation volume =	20 CY



PROFILE VIEW

DESIGNED SKC DATE 06/2014 APPROVED BY
DRAWN SKC DATE 06/2014 TITLE
TRACED DATE TITLE
CHECKED DATE

WA

Kristoferson Farms
Fish Passage Project - Lower Crossing
SNOHOMISH COUNTY,

USDA NATURAL RESOURCES CONSERVATION SERVICE
SNOHOMISH CONSERVATION DISTRICT

REVISION NO. 1
DRAWING NO. CrossSection1.dwg
SHEET 2 OF 2

NOTES

Bankful width at this site is approximately 8 feet wide based on measurements and observations made above and below crossing site.

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STEVEN KELLY CAHILL
STATE OF WASHINGTON
47400
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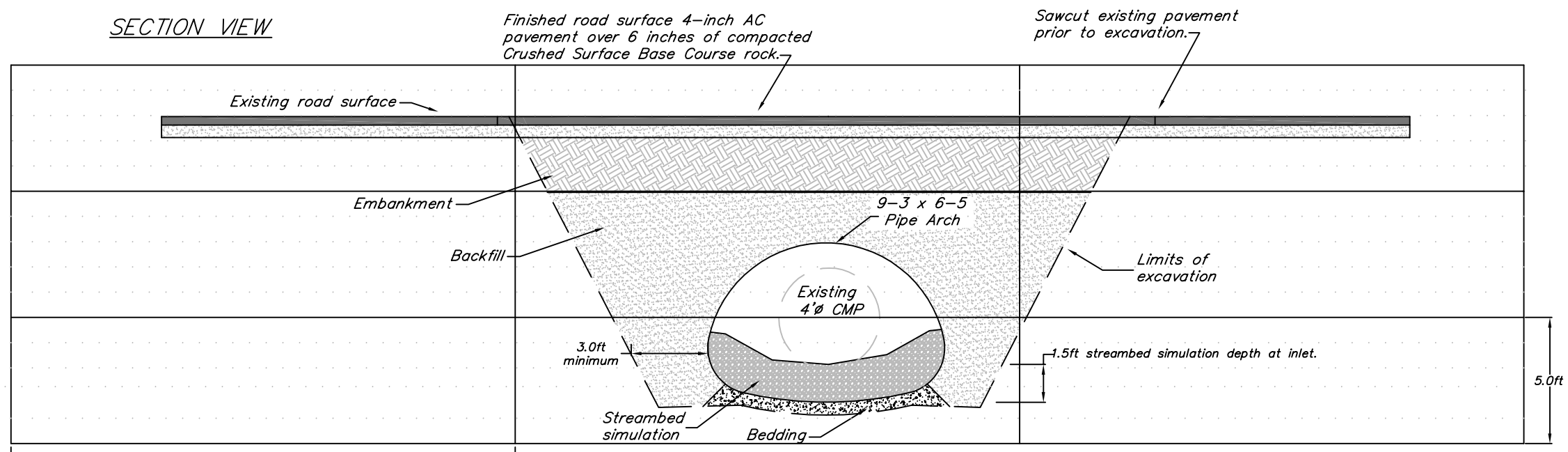
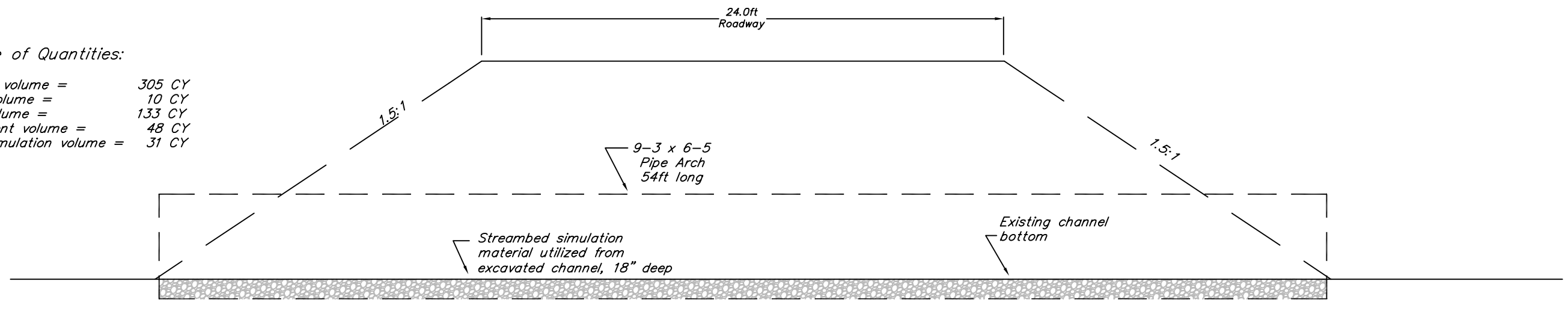
PRELIMINARY

SECTION VIEW



Estimate of Quantities:

Excavated volume =	305 CY
Bedding volume =	10 CY
Backfill volume =	133 CY
Embankment volume =	48 CY
Stream Simulation volume =	31 CY



PROFILE VIEW

DESIGNED SKC DATE 06/2014
DRAWN SKC DATE 06/2014
TRACED DATE
CHECKED DATE
APPROVED BY
TITLE
TITLE

WA

Kristoferson Farms
Fish Passage Project – Upper Crossing
SNOHOMISH COUNTY, WA

USDA NATURAL RESOURCES CONSERVATION SERVICE
SNOHOMISH CONSERVATION DISTRICT

REVISION NO. 1
DRAWING NO. CrossSection1.dwg
SHEET 1 OF 2