

AUTOCAD®
CIVIL 3D®
2008

India Country Kit – AutoCAD Civil 3D 2008

Revision History

Date:	Author	Description
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1. Objective

India Country Kit is developed to make available Indian civil design & drafting standard available in improve the adaptability of AutoCAD Civil 3D 2008 in India.

2. Country Kit Contents

This is the first country kit of AutoCAD Civil 3D 2008 developed for India. It provides –

- a. Superelevation standards as defined by Indian Roads Congress
- b. Custom Indian reports
- c. Additional standard UK reports
- d. Basic drafting standards

3. Superelevation Standard

Superelevation design standards are developed according as per Indian Road Congress [IRC] publication – Guidelines for Design of Horizontal Curves for Highways and Design Tables [IRC:38-1988].

India Country Kit for AutoCAD Civil 3D 2008 meets following design standards –

- a. minimum radius of horizontal curves for different terrain conditions for minimum design speeds
- b. super elevation for different speeds and curve radii
- c. minimum transition lengths for different speed and curve radii

India Country Kit addresses two scenarios for applying superelevation –

- a. Curve with NO transition
- b. Curve with transition

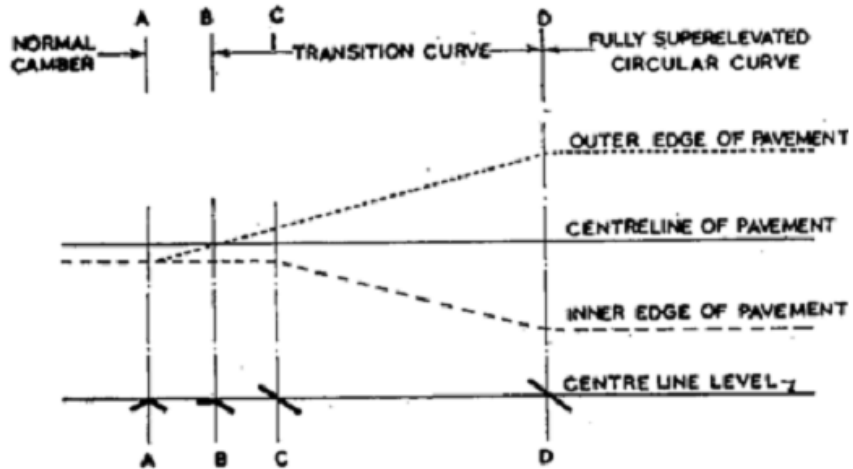
3.1. ***Curve with NO transition***

Two-third superelevation is attained on the straight section before start of the circular curve and the balance one-third on the curve.

3.2. ***Curve with transition***

The normal cambered section of the road is changed into superelevated section in two stages. First stage is the removal of adverse camber in outer half of the pavement. In the second stage, superelevation is gradually built-up over the full width of carriageway so that required superelevation is available at the beginning of the circular curve.

The superelevation should be attained gradually over the full length of the transition curve so that the design superelevation is available at the starting point of the circular portion.



LEGEND

- CROSS SECTION AT AA-NORMAL CAMBER
- CROSS SECTION AT BB-ADVERSE CAMBER REMOVED
- CROSS SECTION AT CC-SUPERELEVATION EQUAL TO CAMBER
- CROSS SECTION AT DD-FULL SUPERELEVATION ACHIEVED

Figure 1: Superelevation Attainment on Curve with Transition

4. Custom Indian Reports

Reports are self explanatory.

4.1. Alignment Chainage Offset increment Report

Create Reports - Alignment Report

Alignment Chainage Offset Increment Report Description

The incremental chainage option will generate a report that displays elevation information along selected horizontal alignment across selected swath width and offset increment . This information displays according to the entered chainage increment value.

List of alignments

Include	Name	Description	Station Start	Station End
<input checked="" type="checkbox"/>	Alignment 1		00.000	578.836
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				

Report settings

Start Chainage:

End Chainage:

Surface :

Station Increment :

Swath Width :

Offset Increment :

Save report to :

Figure 2: Alignment Chainage Offset increment Report - Dialog Box

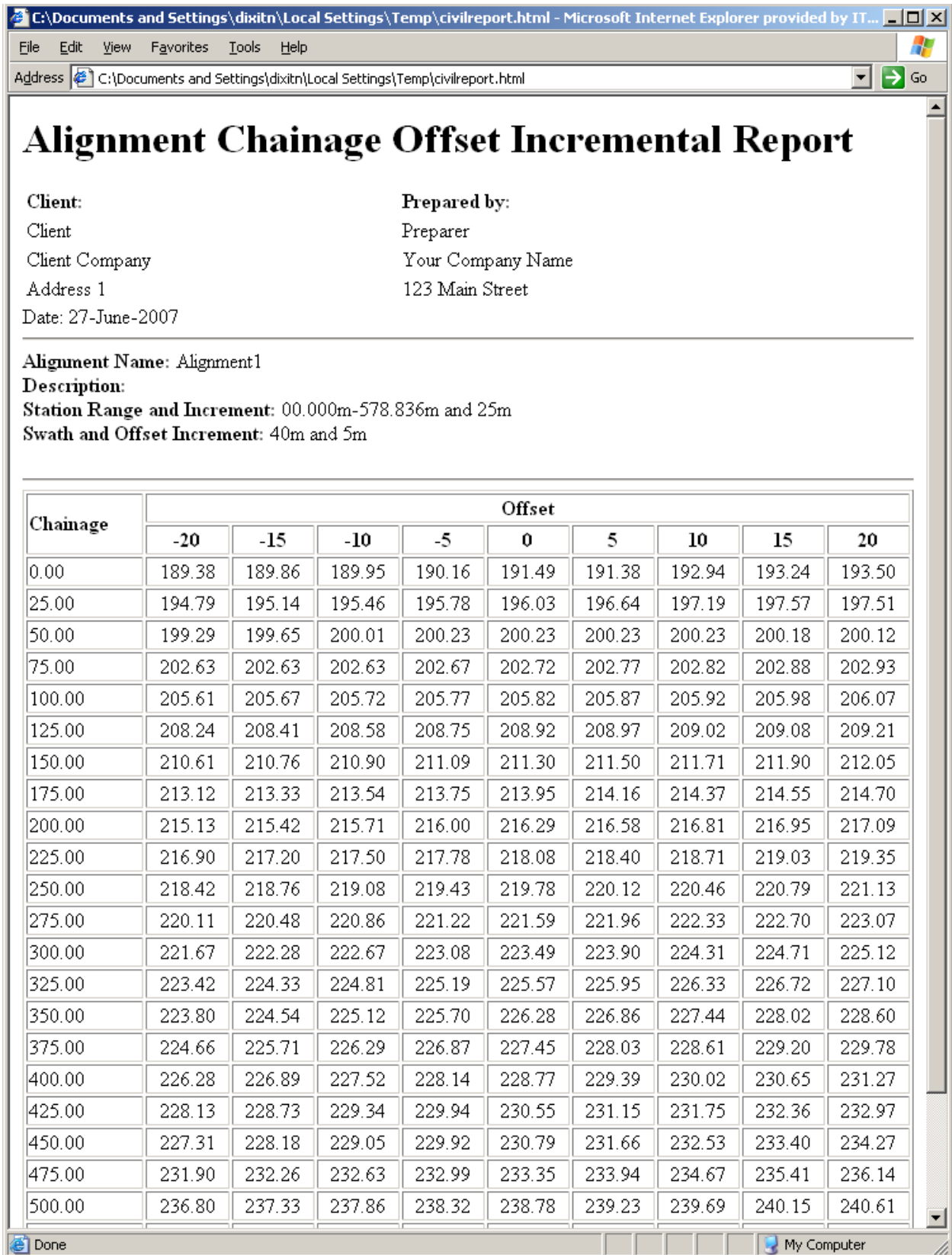


Figure 3: Alignment Chainage Offset increment Report - Sample Partial Report

4.2. Alignment Increment Chainage Report

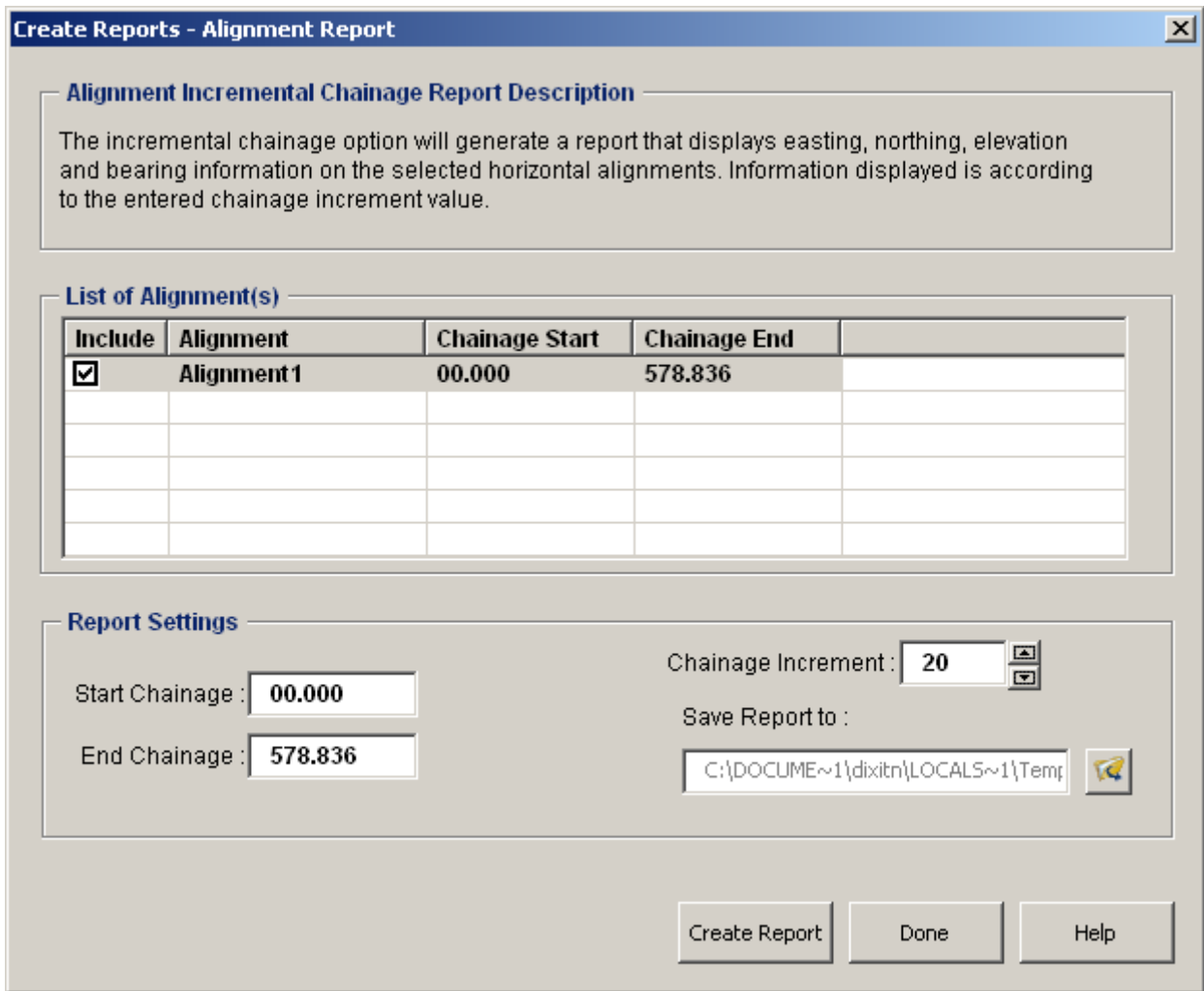


Figure 4: Alignment Incremental Chainage Report - Dialog Box

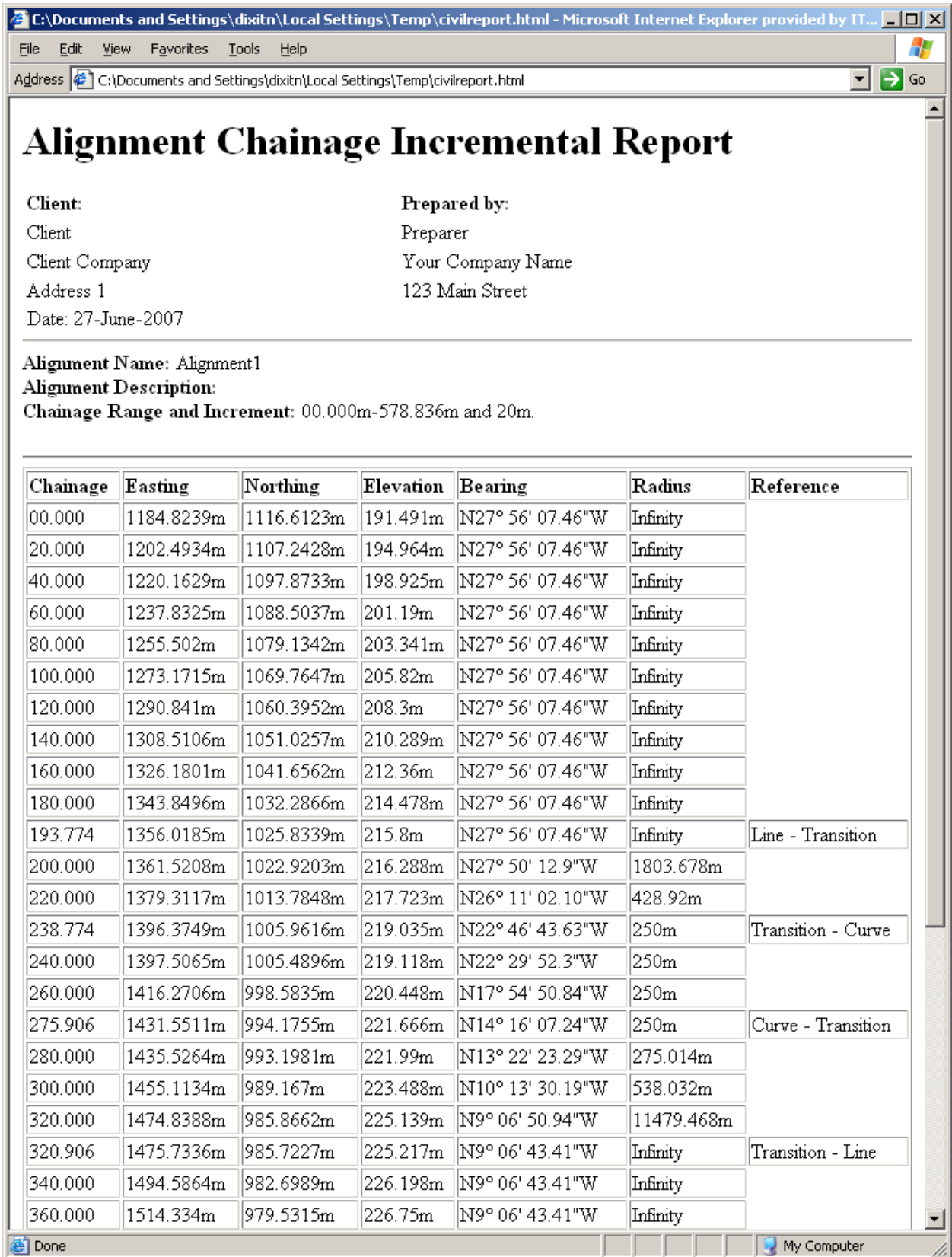


Figure 5: Alignment Incremental Chainage Report - Sample Partial Report

4.3. XYZ along Feature Line(s) / Alignment Report

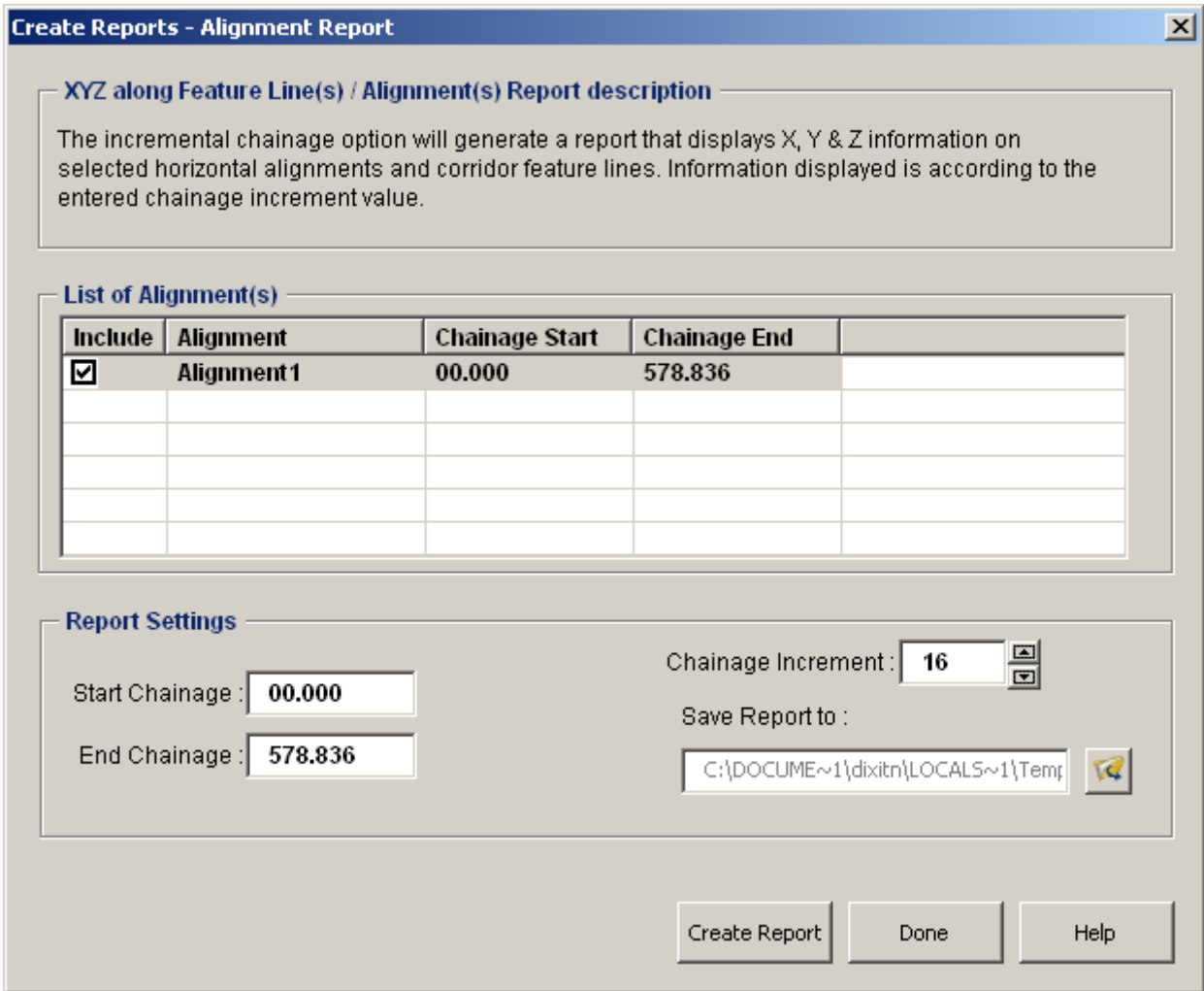


Figure 6: XYZ along Feature Line(s) / Alignment Report - Dialog Box

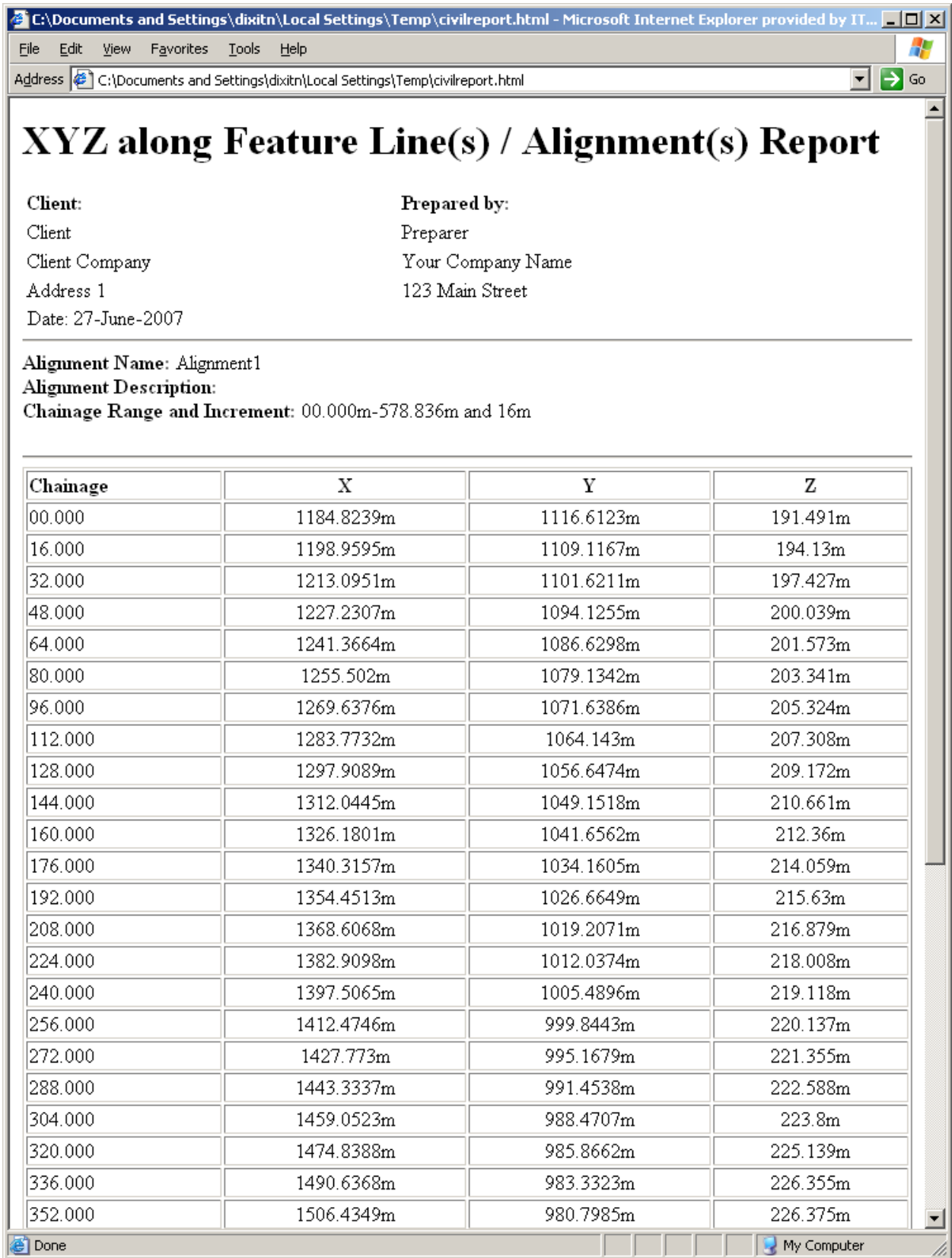


Figure 7: XYZ along Feature Line(s) / Alignment Report - Sample Partial Report

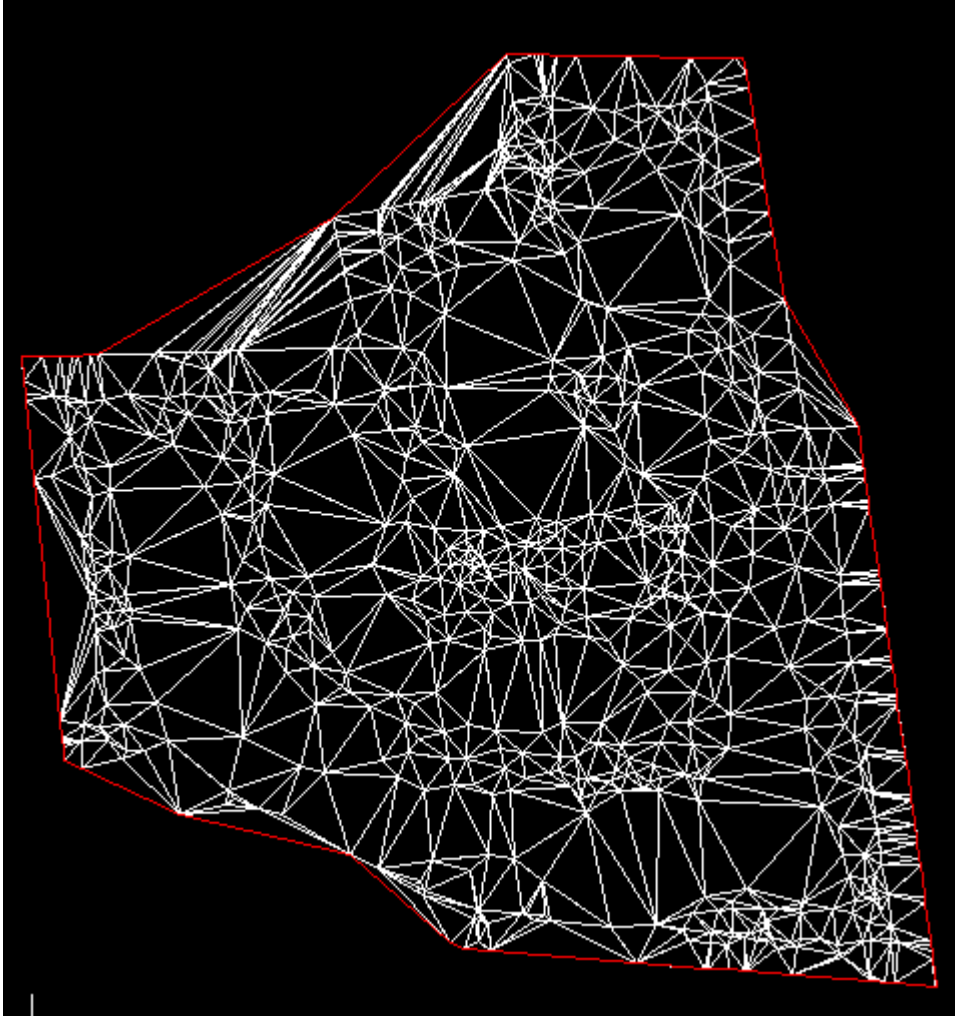


Figure 10: Drafting Standard - White Surface Triangulation

6. Conclusion

This country kit attempted to include all standards which are located by Autodesk Team and Indian users' community.

This kit will be enriched in future released with more Indian standards.

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