

VI.C. Geohazard Exploration Checklist

C-R-S:	PID:	Reviewer:	Date:
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General Presentation				
Y	N	X	1	Has a paper copy and electronic copy of all geotechnical submissions been provided to the District Geotechnical Engineer (DGE)?
Y	N	X	2	Has the geotechnical specification (title and date) under which the work was performed been clearly identified on every submission (reports, plans, etc.)?
Y	N	X	3	Has the first complete version of all documents being submitted been labeled as 'Draft'?
Y	N	X	4	Subsequent to ODOT's review and approval, has the complete version of the revised documents being submitted been labeled as 'Final'?
Y	N	X	5	Have the electronic copies of the final geotechnical plan sheets been submitted as TIFF images?
Y	N	X	6	Have the plan sheets been prepared using the size, lettering, format, file management, and CADD standards as prescribed in the applicable sections of the ODOT CADD Engineering Standards Manual?
Y	N	X	7	Has a scale of 1"=1' been used for cover sheets and laboratory test data sheets?
Y	N	X	8	Based on the project length, has the correct horizontal scale been used to plot the project data? Check scale used: <input type="checkbox"/> 1" = 20', 30', 40', or 50' for projects 1500' or less (use largest scale appropriate to present entire plan on one sheet) <input type="checkbox"/> 1" = 50' projects greater than 1500'
Y	N	X	9	Has a scale of 1" = 10' been utilized for the vertical scale of the project data?
Y	N	X	10	Have the cross-sections been plotted at a scale of 1" = 10' (preferred) or 1" = 20' (for higher or wider slopes)?

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Cover Sheet	
	11 Has the following general information been provided on the cover sheet
Y N X	a. Brief description of the project?
Y N X	b. Brief presentation of geological and topographical information? Include comments on structure and pavement conditions.
Y N X	c. Brief presentation of boring and sampling methods? Include date of last calibration and drill rod energy ratio as a percent for the hammer systems used.
Y N X	d. Summary of general soil, bedrock, and groundwater conditions, including a generalized interpretation of findings?
Y N X	e. Statement of where original drawings and data may be inspected?
Y N X	f. Statement of where soil or rock samples may be inspected, if applicable?
Y N X	g. Initials of personnel and dates they performed field reconnaissance, subsurface exploration and preparation of the soil profile?
Y N X	12 Has a Legend been provided on the cover sheet?
	13 Have the following items been included in the Legend:
Y N X	a. Symbols and usual descriptions for only the soil and bedrock types encountered, as per the Soil and Rock Symbology Chart in Appendix D of the SGE?
Y N X	b. All miscellaneous symbols and acronyms, used on any of the sheets, defined?
Y N X	c. The number of soil samples for each classification that were mechanically classified and visually described in the current exploration?
Y N X	14 Has a Location Map, showing the beginning and end stations for the project, been shown on the cover sheet, sized per the L&D Manual?
Y N X	15 Have the station limits for each plan and profile sheet for projects greater than 1500' been identified in a table?
Y N X	16 Have the station limits for any cross section sheets been identified in the same table?

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Plan and Profile		
	17	Has the following information been shown in a roadway plan drawing:
Y N X	a	Existing surface features - Section 702.5.1?
Y N X	b	Proposed construction items – Section 702.5.2?
Y N X	c	Project and historic boring locations, with appropriate exploration targets and exploration identification numbers?
Y N X	d	Notes regarding observations not readily shown by drawings?
Y N X	18	Have the existing ground surface contours been presented?
Y N X	19	If cross sections are to be developed for stationing covered on a plan sheet, has an index for the appropriate cross section sheets been included on the plan sheet?
Y N X	20	Has all the subsurface data been presented in the form of a profile along the centerline or baseline, and on cross sections where applicable?
	21	Have the graphical boring logs been correctly shown, as follows:
Y N X	a.	Location and depth of boring indicated by a heavy dashed vertical line?
Y N X	b.	Exploration identification number above the boring
Y N X	c.	Logs indicate soil and bedrock layers with symbols 0.4" wide and centered on the heavy dashed vertical line where possible?
Y N X	d.	Bedrock exposures with 0.4" wide symbols, but without a heavy dashed vertical line.
Y N X	e.	Soil and bedrock symbols as per ODOT Soil and Rock Symbology chart (SGE - Appendix D)?
Y N X	f.	Historical borings shown in same manner with the exploration identification number above the boring?
Y N X	22	Have the proposed profile and existing groundline been shown on the profile view, according to ODOT CADD standards?
Y N X	23	Have the offsets from centerline or baseline been indicated above the borings in the profile view?

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Y	N	X	24	Have borings located immediately adjacent to the centerline or baseline and considered representative of centerline or baseline subsurface conditions been referenced directly to the centerline or baseline?
Y	N	X	25	Have offset borings in or near the same elevation interval of a centerline or baseline boring been plotted immediately above or below the centerline boring in a box containing an elevation scale?
Y	N	X	26	Have cross-sections been developed to show subsurface conditions disclosed by a series of borings drilled transverse to centerline or baseline?
Y	N	X	27	Have the existing and proposed groundlines been displayed on cross section sheets according to ODOT CADD standards?
Y	N	X	28	Have bedrock exposures shown on the cross sections been plotted along the contour of the cross section?
			29	Has the following information been provided adjacent to the graphical logs or bedrock exposure:
Y	N	X		a. Thickness, to the nearest 0.1', of sod/topsoil or other shallow surface material written above the boring (with corresponding symbology at top of log)?
Y	N	X		b. Moisture content, to nearest whole percent, with the text aligned with the bottom of the sample? Label this column as 'WC' at bottom of boring.
Y	N	X		c. N_{60} , aligned with bottom of sample? Label this column as ' N_{60} ' at bottom of boring.
Y	N	X		d. Free water indicated by a horizontal line with a 'w' attached, and static water indicated by a shaded equilateral triangle, point down?
Y	N	X		e. Visual description of any uncontrolled fill or interval not defined by a graphical symbol?
Y	N	X		f. Organic content with modifiers, per 603.5?
Y	N	X		g. Designate a plastic soil with moisture content equal to or greater than the liquid limit minus three with a 1/8" solid black circle adjacent to the moisture content?
Y	N	X		h. Designate a non-plastic soil with moisture content exceeding 25% or exceeding 19% but appearing wet initially, with a 1/8" open circle with a horizontal line through it adjacent to the moisture content?
Y	N	X		i. The reason for discontinuing a boring prior to reaching the planned depth indicated immediately below the boring?

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Boring Logs	
Y N X	30 Have the boring logs of all geohazard borings and any roadway borings drilled in the vicinity of the geohazard been shown on the sheet(s) following the plan and profile views (or cross-sections, if applicable)?
Y N X	31 Has a scale of 1"=1' been used for the boring log sheets?
Y N X	32 Have the boring logs been developed by integrating the driller's field logs, laboratory test data, and visual descriptions?
	33 Has the following boring information been included in the heading of each boring log:
Y N X	a. Exploration identification number?
Y N X	b. Project designation (C-R-S) and PID?
Y N X	c. Centerline or baseline name, station, offset, and surface elevation?
Y N X	d. Coordinates?
Y N X	e. Method of drilling?
Y N X	f. Static and free water-level observations?
Y N X	g. Date started and date completed?
Y N X	h. Method and material (including quantity) used for backfilling or sealing, including type of instrumentation, if any?
Y N X	i. Date of last calibration and drill rod energy ratio (ER) in percent for the hammer system(s) used?
	34 Has the following boring information been included in each boring log:
Y N X	a. A depth and elevation scale?
Y N X	b. Indication of stratum change?
Y N X	c. Description of material in each stratum?
Y N X	d. Depth of bottom of boring?
Y N X	e. Depth of boulders or cobbles, if encountered?
Y N X	f. Caving depth?
Y N X	g. Artesian water level and height of rise?
Y N X	h. Running sand?
Y N X	i. Cavities or other unusual conditions?
Y N X	j. Depth interval represented by sample?

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Y	N	X	k.	Sample number and type?
Y	N	X	l.	Percent recovery for each sample?
Y	N	X	m.	Measured blow counts for each 6 inches of drive for split spoon samples?
Y	N	X	n.	N ₆₀ to the nearest whole number?
Y	N	X	o.	Particle-size analysis?
Y	N	X	p.	Liquid limit, plastic limit, plasticity index?
Y	N	X	q.	Water content?
Y	N	X	r.	ODOT soil classifications, with 'Visual' in parentheses for those samples visually classified?
Y	N	X	s.	Bedrock descriptions?
Y	N	X	t.	Run rock core percent recovery?
Y	N	X	u.	Run RQD?
Y	N	X	v.	Unit rock core percent recovery?
Y	N	X	w.	Unit RQD?
Y	N	X	x.	SDI, if applicable?
Y	N	X	y.	Rock compressive strength test results, if applicable?
Y	N	X	35	Have all undisturbed test results been displayed in graphical format on the sheet(s) following the boring log sheet(s)?

Notes:

Stage 1: