

Construction Infrastructure Drawings (CID) Checklist

Town of Rolesville Planning Department | PO Box 250 | Rolesville, NC 27571 | 919-554-6517 | planning@rolesville.nc.gov

Disclaimer: This checklist does not cover all codified requirements but is intended to provide some guidance

based on the best practices. Where applicable, requirements are referenced within the <u>Town of Rolesville Land Development Ordinance</u> and/or other State Ordinances. For items marked "YES", instead of a "Check", please place the sheet number the requirement is shown.

TO BE COMPLETED BY APPLICANT	YES	N/A
COVER SHEET		
Project name (shall not duplicate an existing name)	C-0.00	
2. Project number and submittal type (will be given at first review; place CID-YR-XX as a placeholder)	C-0.00	
3. Date (original submittal and space for at least 3 re-submittals located in a table) – ideal location is center of sheet	C-0.00	
4. Location (Address if available, general description otherwise, and if within Town Limits or ETJ)	C-0.00	
5. Vicinity map with north arrow.	C-0.00	
6. Sheet index numbered numerically (1,2,3) – number of described sheets shall match number of sheets in plan set. User shall easily and rapidly be able to discern from Sheet Index what the sheet number is, then find it in plan set.	C-0.00	
7. Overall development map (if part of larger project) with project area clearly identified as a sub-part of (larger project)		X
8. Site data table including: Property Identification Numbers (PIN) for all properties, Book of Maps/Deed reference, Zoning/Overlay District, Watershed, River Basin, Current Use(s), Proposed Use(s), Current Impervious, Proposed Impervious, Parking Data per use, Tree Coverage Data, Building Height, and Building Square Footage(s) and/or residential density and unit data per housing type	C-0.00	
9. If located in the floodplain, provide correct Flood Insurance Rate Map (FIRM) panel number and date		
10. Contact information for owner, applicant, and all consultants	C-0.00	
11. Professional seal		Χ
12. Existing Conditions of Approval (Special use permits, conditional zonings, etc.)		X
13. Application references of previous approvals/entitlements; if Rezoning, Special Use Permit, or Variance conditions etc., list them verbatim by reference in title text box.		Χ
EXISTING CONDITIONS AND/OR DEMOLITION PLAN SHEET(S) **RECENT SURVEY RECOMMENDED** REFER TO C-2 SERIES FOR EXISTING CONDITIONS AND DEMOL	JTION P	LAN
1. Title of project / Dimensions / Scale / north arrow		
2. Professional seal		
3. Site size, metes and bounds of property boundary, Location Map (showing context of area)		
4. Property lines and Property Identification Number (PIN) of site and adjacent properties		
5. Owner information for the subdivision / parcels		
6. Street names, Block and Lot numbering, Addresses all per the PSP.		
7. Adjacent property information – Owner Name, PIN, Plat/Deed ROD Ref., Jurisdiction, Zoning district		
8. Owner information for the parcel of the project location		
9. Existing / Adjacent streets (name / number of lanes / right-of-way width, SR # if DOT)		
10. Existing Land use (of site and adjacent properties)		
12. Any existing features located within the right-of-way		
13. Building Setbacks per the PSP – LDO Section 3		
13. Existing building footprint(s) with square footage and number of stories		
14. Existing infrastructure: loading areas, parking, driveways, alleys, streets, sidewalks, dumpsters, lighting, septic tanks, drain fields, wells, hydrants (within 500 feet of site), water meters, culverts (other subsurface features), utility or other easements (type, size, and whether public or private), railroads, cemeteries, etc.		
15. Existing recorded open space or common areas (including easements)		

16. Topographic contours, contours shall extend 100' past property limits	
17. Environmental features (name and location) inc. stream buffers, drainage ways, wetlands, rock outcrops, significant steep slope areas, etc.	
18. Existing vegetation (with general description and location)	
19. Demolition proposed (on this sheet or separate if existing conditions under demolition are illegible)	
20. Dimensions, scale, and north arrow	
SITE LAYOUT SHEET(S)	
1. Title of project / Dimensions / Scale / north arrow	C-1.00, C-1.0
2. Base information to remain (clearly distinguish between existing and proposed conditions)	X
3. Building Setback minimum dimensions per the zoning district – LDO Section 3	X
4. Flood protection zones (if applicable)	X
5. Parking calculations for all but single-family Detached (vehicle, handicapped, guests, and bicycle as	X

5. Parking calculations for all but single-family Detached (vehicle, handicapped, guests, and bicycle as they apply) – LDO Section 6.4		X
TO BE COMPLETED BY APPLICANT	YES	N/A
8. Driveways, stacking spaces, and parking areas (with number of spaces per bay, space size, and pavement type labeled) – LDO Section 6.4.4		X
9. Handicap aisles, spaces, signage, and accessible routes to main entrance are labeled and dimensioned		X
10. Bicycle parking location (with rack details) - LDO Section 6.4.7		X
11. Sight distance triangles – LDO Section 9.2 (10'x70' on all Collector roads and NCDOT required driveway permits)	C-1.00), C-1.0
12. Sidewalks, walkways, and trails dimensioned, and material noted – LDO Section 9.2	C-1.00), C-1.0°
13. ADA ramps are shown; directional crossings shall be provided at intersections	C-1.00), C-1.0 ²
14. Loading, storage, and service areas (with required screening) – LDO Sections 6.2.4 and 6.4.5	<u> </u>	X
15. Trash handling and recycling facilities (with required screening and details) – LDO Section 6.2.4		X
16. Show all fire lanes and access routes		X
17. Utilities (existing and proposed) (above ground utilities to be screened, with details) – LDO Section 6.2.4 & 6.8.8		X
18. ROW and streets are labeled and dimensioned; Public vs. Private should be clearly defined – LDO Section 9.2		
19. Easements - labeled & dimensioned; Public vs. Private should be clearly defined – LDO Section 9.2.4		
20. Street centerlines should include bearing and distance information including curve radii (minimum centerline radii are defined by terrain classifications per NCDOT Subdivision Roads Minimum Construction Standards)		
21. Radii labeled for all intersections, or a typical label included		
22. Tree protection fencing location with details and standard notes – LDO Section 6.2.4 & 6.2.5		
23. Stream buffers, drainage ways, wetlands, wetland buffers w/ necessary setbacks – LDO Section 4.2.9		
24. Open space (dedicated or reserved) and any proposed improvements within – LDO Section 6.2.1		
25. Greenways and Sidepaths per 2022 Greenway and Bicycle Plans.		
25. Landscape buffer locations and widths – LDO Section 6.2.2	C-6.01	, C-6.02
26. Location and Dimension of street tree planting strip – LDO Section 6.2.2.2.D	_	. C-6.02
27. Location of any proposed monument or ground signs – LDO Section 6.1.2	C-1.00), C-1.0 ²
28. Easements for planned ground-mounted/monument type Sigsns (Signs require separate Permits post infrastructure construction) – LDO Section 6.1.		X
29. Other site features unique to the proposed use		, C-1.01
30. ADA ramps are shown and design is meeting slope requirements for ADA compliance	C-3.01	, C-3.02
31. 4:1 asphalt taper is provided from existing ground to proposed back of curb (when applicable)		X
SIGNING AND STRIPING		
The information below shall be included for signing and striping and shown either on the Site Plan or a separate sheet depending on available space for legibility:	1	
1. Object markers (OM-3R) and Keep Right sign (R4-7) shall be placed at beginning of islands		

2. Bike lanes should be striped if (1) wider than 5'; (2) part of a complete section (if applicable)

4. Stop bars shall be included 4' behind the crosswalk striping

Crosswalk striping

5. All required signs (location and type clearly defined) – Stop, Yield, Speed Limit, Sharp Turn, etc.	
6. Any public right-of-way, private or public access easement, or Greenway/Sidepath that is intended to be extended in the future shall be signed with signage to that effect (Town to review sign verbiage).	
6. Additional pavement markings as required per design	
EROSION CONTROL PLAN SHEET(S) REFER TO SHEETS C-4 series for Erosion Control	
1. Scale and north arrow	
2. Limits of land disturbance	
3. Grading (contours at 2-foot intervals within 100 feet of developed area). Clearly distinguish between existing and proposed contours; Contours should be labeled regularly enough to follow drainage patterns.	
4. Impervious surfaces (label and provide calculations)	
5. Existing vegetation (types and locations) – LDO Section 6.2.4.5	
6. Retaining walls labeled with top and bottom of wall elevations (wall details required)	
7. Stormwater ponds, bioretention facilities, etc.	
8. Preliminary storm drainage features and proposed/recorded Easements	
9. Erosion control features defined by notes and/or a legend	
10. Tree protection fencing location (reference detail location if on separate sheet)	
11. Label critical root zones – LDO Section 6.2.4	
12. Erosion Control design shall meet Wake County standards. Please reference the Wake County Sediment and Erosion Control Construction Checklist	
GRADING AND DRAINAGE PLAN SHEET(S) REFER TO SHEETS C-3 series for Grading and	Drainage Pl
1. Scale and north arrow	
Grading (contours at 2-foot intervals); Clearly distinguish between existing and proposed contours;Contours should be labeled regularly enough to follow drainage patterns	
3. Proposed infrastructure including streets, sidewalks, greenways, retaining walls (labeled with top and bottom elevations), ponds, storm sewer, and utilities	
4. Utility or other easements (type, size, and whether public or private); 20' PDE shall be required around outfall from ROW	
5. Existing vegetation (types and locations) – LDO Section 6.2.4.5	
6. Drainage schedule (Minimum pipe size shall be 15"; minimum crossline pipe size shall be 18")	
7. All drainage structures shall meet their minimum depth	

TO BE COMPLETED BY APPLICANT	YES	N/A
UTILITY PLAN SHEET(S) REFER TO SHEETS C-5 series for Utility Plan		
1. All utilities (shown underground); Storm sewer should be clearly depicted separately from sewer and water – LDO Section 4.1.2		
2. Dimensions, scale, and north arrow		
3. Above-ground utilities and equipment (screened and with details) – LDO Section 6.2.4 and 9.2.6		
4. Tree protection fencing location (reference detail location if on separate sheet)		
5. Sewer and water design are to meet the City of Raleigh Public Utility standards		
LIGHTING PLAN SHEET(S) REFER TO DUKE ENERGY PLANS FOR LIGHTING		
A lighting plan is required per LDO Section 6.6.F. It shall be prepared, signed, and sealed by a licensed engineer. Residential subdivisions shall contact Duke Energy /Wake Electric for the preparation of the lighting plan. It shall be of an engineered scale that is easily legible and include the following:		
1. Title of project		
2. Professional seal		
3. Dimensions, scale, and north arrow		
4. All proposed and existing buildings on the site		
5. Pedestrian and vehicular areas		
6. Other above-ground improvements		
7. The horizontal location of all proposed and existing outdoor lighting fixtures, including pole and wall-mounted fixtures		1
8. Mounting heights of each fixture		
9. Overall height of each pole above grade		
10. Location of externally illuminated signs and associated fixtures		,

	1	
11. The location of all architectural and landscape lighting fixtures	1	
12. Lighting plans shall be specified and calculated in maintained footcandles (FC). Measurements of ligh levels shall be taken at finished grade with an accurate and calibrated light meter – LDO 6.6.F.3		
13. The plan must include a footcandle plan that provides typical footcandle contours and a point photometric grid that indicates footcandle levels measured at grade across the site. Maximum, average, and minimum site foot-candles, uniformity ratio (average and minimum), and depreciation factors also are required. The plan must show initial horizontal illuminance values in foot-candles for the area to be illuminated. These values must be calculated at grade and include contributions from all onsite fixtures.		
14. The plan must plot foot-candles of illumination at ground level to the nearest tenth of a foot-candle, and at horizontal grid intervals of no more than ten feet.		
15. The plan shall show illumination level at the lot line (or perimeter of a development, if applicable) to ensure maximum illumination levels are not exceeded.		
16. The manufacturer's cut sheets (specifications) for each proposed fixture must be submitted.		
17. A lighting fixture schedule that presents the following information: Fixture type, including the manufacturer's product identification catalog number and fixture mounting height.		
18. Any other information required to ensure compliance with Lighting design standards - LDO Section 6.6	6	
19. Note: Residential lighting improvements (such as flood lights or landscape lighting) not subject site plan or subdivision plan , for single-family (detached and attached), two-family dwellings, or multiple family dwellings such as apartments or condos does not require a lighting plan.		
PLAN AND PROFILE SHEETS REFER TO SHEETS C-5.10, C-5.11, C-5.2	0, C-5.	21
The following shall be provided in the plan view: FOR PLAN AND PROFILES	1	
1. ROW and easement labels and dimensions	1	-
2. Milled lap joints (if applicable)		
3. Mill and overlay limits are clearly defined		
4. EEOP, EOP and EOTL labels when applicable		
Minimum separation requirements are met (horizontally) Horizontal curve data		
The following shall be provided in the profile view:		
Profiles for all new or modified open ended crosslines (include inverts, centerline and EOP elevations)		
2. Show existing and proposed roadway profile; clearly label each		
3. Proposed grades tie into existing; profiles tie into the proposed cross-slope at the flow line across roadway intersections		
4. Minimum bury depth requirements are met and labeled (24" minimum for storm sewer, City of Raleigh requirement for minimum of sewer and water)		
5. Minimum separation requirements are met (vertically) and labeled where applicable (City of Raleigh minimum separation requirements; concrete collar required where minimum cannot be met)		
6. Vertical curve data is clearly labeled (VC lengths shall be in 50' increments; The minimum K value and maximum street grades are defined by terrain classification per NCDOT Subdivision Roads Minimum Construction Standards)		
7. Site distance profiles (when applicable)		
LANDSCAPE PLAN SHEET(S) REFER TO SHEETS C-6 SERIES FOR LANDSCAPE PLAN	S	
Preservation plan (LDO 6.2.4.5.C.) – This can also be on the landscape plan sheet, but Staff would suggest this be its own plan sheet as it must include all the following:		
a. A tree and/or vegetative survey <u>preferred to be prepared by a Certified Arborist</u> (LDO Section 6.2.4.5B)		
b. The plan must show there will be no disturbance within a critical root zone of trees, as defined in the LDO.		
TO BE COMPLETED BY APPLICANT	YES	N/A
c. A critical root zone shall be protected from encroachment and damage. The preferred method is to restrict access by installing a barrier to keep materials, people, or equipment out of the critical root zone, as required in the preservation standards above.		
d. Barriers shall be accompanied by temporary signs labeling the critical root zone.		
e. The critical root zone area shall remain free of all building materials and debris.		
f. The plan shall include a location plan and boundary line survey of the property.	1	
g. The plan shall show the size, location, and species of trees.		

i. The plan shall graphically identify each tree to be saved or removed.	
j. The plan shall demonstrate compliance with all vegetation preservation standards of LDO Section 6.8.4.5C.	
Landscape plan shall be prepared by a licensed Landscape Architect. Refer to LDO Section 6.2.4.2	
for a complete of the Landscape Plan review requirements. The plan shall include/show the following:	
1. LDO 6.2.4.2. – All details related to the Landscape Plan.	
2. Table Identifying and quantifying all Required and Proposed landscaping (LDO 6.2.1Open Space / 6.2.2.1 – Perimeter Bufferyards / 6.2.2.2 – Street Bufferyards / IF a Mixed Use District, 6.2.3. Perimeter Compatibility / Parking Landscaping – LDO 6.2.4.4. / Vegetative Preservation – 6.2.4.5. / Screening – 6.2.4.6.	
3 Vegetation Preservation Plan – LDO 6.2.4.5.	
4. Vehicle Use Areas (VUA) including parking, aisles, and driveways – LDO 6.2.4.4	
5. Overhead and underground utilities and respective Easements inc. recording info (BM/Bk & Pg)	
6. Tree protection fencing location (reference detail location if on separate sheet) – LDO 6.2.4.5.	
7. Detailed Plant list (keyed to plan, showing what requirement each plant will fulfill, caliper size and height of plants, condition of root ball, common name and botanical name, # of each plant) – LDO 6.2.4.3.	
8. Samples of existing vegetation in required buffers (with Critical Root Zones) – LDO Article 6.2.4.5	
9. Street trees (with calculations) per LDO Section 6.2.2.2.	
10. Lighting, water, sewer, storm drainage systems, and easements (half-toned) to check for conflicts	
11. Fences, walls and/or berms (with height and details) – LDO Article 6.5	
ARCHITECTURAL DRAWINGS	
Compliance with Applicable Standards: Please refer to the specific standards that may apply to your project. Applicants are required to demonstrate compliance with the applicable standards as follows:	X
a. Nonresidential building design standards – LDO Article 6.8.2	Χ
b. Single family design guidelines – LDO Article 6.8.5 (Note consent statement required on application and final plat)	X
c. Multifamily design standards – LDO Article 6.8.6	X
d. Industrial design standards – LDO Article 6.8.7	X
Drawings must be to scale and have a graphic scale	X
3. Building elevations with total building height and Finished Floor Elevations (FFE) labeled	X
4. All building materials must be labeled	X
5. Building façade width and width of materials on the façade shall be labeled	Χ
WAKE COUNTY FIRE ADDITIONAL REQUIREMENTS	
Note: This area applies to subdivisions only. The information below shall be included in addition to all information noted above.	X
Access roads shall be a minimum of 20 ft wide of an all-weather surface capable of withstanding-imposed loads of fire apparatus- unless the town LDO specifies different requirements.	X
2. No vertical obstructions within 13 ft 6 inches of the road surface which includes – trees, brush, gates	Χ
3. Any dead end which exceeds 150 ft in length shall have a 60 ft hammerhead turnaround provided. A temporary turnaround shall be used in phase construction where a dead end is temporary	X
4. Cul-de-sac width shall be a minimum of 96 ft diameter or a radius of 48 ft. The Fire Chief can request or adjust this minimum according to responding apparatus requirements for emergency scene operations.	X
5. Turning radius and grade shall meet DOT specifications. Turning radius for traffic circles may be adjusted with approval if mountable curbs installed.	Х

TO BE COMPLETED BY APPLICANT	YES	N/A
NCDOT ADDITIONAL REQUIREMENTS REFER TO SHEETS C-10 SERIES FOR ROADWA	Y DES	IGN
The information below shall be included in addition to all the information noted above:		
1. The project does NOT restrict any existing accesses for other properties		
2. All shifting tapers are appropriate for the posted speed limit		
3. Turn lanes are shown per STD 1205.05		
4. 50' of full width deceleration is provided		
5. Lane continuity has been assured		

6. All work is shown within the ROW; All work outside of ROW has the appropriate easement shown (as either PROPOSED, or BM/Bk and Page if Recorded)	
7. For NCDOT submittals, driveway radius should be 20' minimum and 50' maximum	
8. If an existing guardrail is being modified, it is clearly labeled and defined (length/offset)	
9. Guardrails provided where warranted and details are included, including length of need calculations, deflection area with no hazard or sidewalk, GRUE is MASH compliant per NCDOT standards; location of guardrail shall be behind sidewalk where applicable	
10. Driveway Permit submitted; please include Permit # if submitted: TBD	
11. Interior Stem protection (100' minimum)	<u> </u>
12. Driveway radius ties into tangent in front of the project's property	<u> </u>
13. Driveway turn out grades meet NCDOT standards	<u> </u>
14. Driveway is not in Functional Area of Intersection	
15. Above ground utility appurtenances are placed as close to the ROW as possible	
16. All storm drainage crosses 90 degrees to the roadway	
17. All drainage structures are not under the pavement unnecessarily	
18. Catch basins shall be provided at the end of the curb and gutter; 5' is provided after a catch basin, before the end of the curb	
19. All hazards are outside of the clear recovery area or outside the proposed ROW Landscaping	-
20. Turn lanes are required if AADT is over 4,000 and at the NCDOT District Engineer's discretion	
21. Turn lanes are required by the TIA; a copy of the TIA shall be provided TBD	
22. Plans shall be approved by the Division Roadside Engineer, 919-816-8290	
23. Traffic Signal Plans shall be approved by the Division Traffic Engineer, 919-536-4000	X
24. Wedging detail is provided when applicable	-
25. All details for work with the ROW along DOT roadways are NCDOT details.	
26. Drainage schedule	
27. All drainage structures meet their minimum depth	
28. HGL 10 year for all closed systems and 25/50 year for those in sags based on classification	-
29. Gutter spread calculated with I = 4"/ hr	
30. Outlet velocity	
31. Sizing for all new or modified open ended crosslines for 25/50 year based on classification	
32. Provide profile for all new or modified open ended crosslines (include inverts, centerline and EOP elevations)	
33. 10-year sizing for all roadside ditches with a reduced cross-section from the existing condition	
34. All pre and post drainage areas for the project	
35. Pre and post drainage calculation for all POIs (25, 50 and 100 year)	
36. Provide bypass at all transition from crown to super and end of median islands (Max. 0.1CFS)	
37. Provide proposed ROW	
38. Provide lane widths (11' min, 15' max)	
39. Provide paved shoulder width (match existing or min 1')	
40. Provide grass shoulder width	
41. Provide milled lap joints if applicable (min 18" wide and 1.5" deep)	
42. Provide a wedging detail if applicable	
43. Is there an overlay? (min 1.5")	
44. Provide cross-slope for the widened section (2% typical in tangent sections)	
45. Provide pavement schedule, typically 3" S9.5C; 4" I19.0C; 10" ABC or if<6' wide, 5"B25.0C	
46. Proposed grade ties into existing grade	
47. Provide existing ROW	
48. Provide proposed ROW	
49. Provide any easements outside of the ROW	
50. Provide EEOP, EOP, EOTL	
51. Provide cross-slope	
52. Provide front and back slope grade	
53. Provide utility depths	
54. Is pavement structure being removed	
55. Any other aspect of the cross-section (c&g, guardrail, sidewalk etc)	

TO BE COMPLETED BY APPLICANT	YES	N/A
56. Turn lanes are required if AADT is over 4000 and at the District Engineer's discretion		
57. All turn lanes required by the TIA are provided		
58. The project does NOT restrict any existing accesses for other properties		
59. 10x70 sight triangles are shown at all intersections and driveways		
60. NCDOT sight distances are provided		
61. 4:1 asphalt taper from existing to proposed Back of Curb		
62. All shifting tapers are appropriate for the posted speed limit		
63. Turn lanes are shown as per STD 1205.05		
64. 50' of full width deceleration is provided		
65. Lane continuity has been assured		
66. Object Markers (OM-3R) shall be placed at beginning of Islands (and R4-7 signs)		
67. Minimum Curb Radii is 20' at driveways		
68. ADA ramps are included. Crossing is directional across the driveway		
69. Mid-block crossing is proposed		
70. Bike Lanes should only be striped if wider than 5' and makes sense as a complete section		
71. All work shown is in the ROW		
72. All work shown outside the ROW has the appropriate easement		
73. Minimum Crossline Pipe Size is 18". Minimum pipe size is 15"		
74. Place 20' PDE around outfall from ROW		
75. Storm drainage crosses 90 degrees to roadway		
76. Storm drainage structures are not under the pavement unnecessarily		
77. There are catch basins at the end of the curb and gutter		
78. There must be 5' after a Catch Basin before the End of the Curb		
79. Provide horizontal curve data		
80. Provide mill and overlay limits		
81. Provide existing roadway profile		
82. Provide driveway profile for all driveways		
83. Ensure crosswalks have a slope of 2% or less		
84. Driveway profile ties into the proposed cross-slope at the flow line across the driveway		
85. Provide vertical curve data		
86. Proposed grade ties in with existing grade		
87. Provide sight distance profile		
88. Is existing guardrail being modified (length or offset)		
89. Guardrail is warranted		
90. Provide length of need calculations		
91. Placed behind sidewalk		
92. Deflection area is provided with no hazard or sidewalk		
93. GREU is MASH compliant as per NCDOT standard		
94. Driveway Permit Submitted, if yes provide permit # in comments		
95. Interior Stem is protected (100' minimum)		
96. Crosswalk is directional at 2%		
97. Driveway radius ties into tangent in front of the project's property		
98. Radius should be 20' min, 50' max		
99. Driveway turn out grades meet NCDOT standards		
100. Driveway is not in Functional Area of Intersection		
101. ALL plan sheets are stamped and signed		
102. All details for work within the ROW are NCDOT details		
103. Landscaping plans shall be approved by the Division Roadside Engineer, 919-816-8290		
104. Traffic signal plans shall be approved by the Division Traffic Engineer, 919-536-4000		
105. Above ground utility appurtenances are placed as close to the ROW as possible		
106. All hazards are outside of the clear recovery area or outside the proposed ROW		
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PF	RE-CONSTRUCTION / STAGING / CONSTRUCTION PARKING / ACCESS / DELIVERIES	
1.	Arrange and hold a Town Pre-Construction Meeting – this meeting will cover all aspects of logistics and communications during the infrastructure construction phase.	X

Last Revised: May 12, 2025