

Drainage Concerns

8459 Shady Grove Rd
North Richland Hills, TX 76182

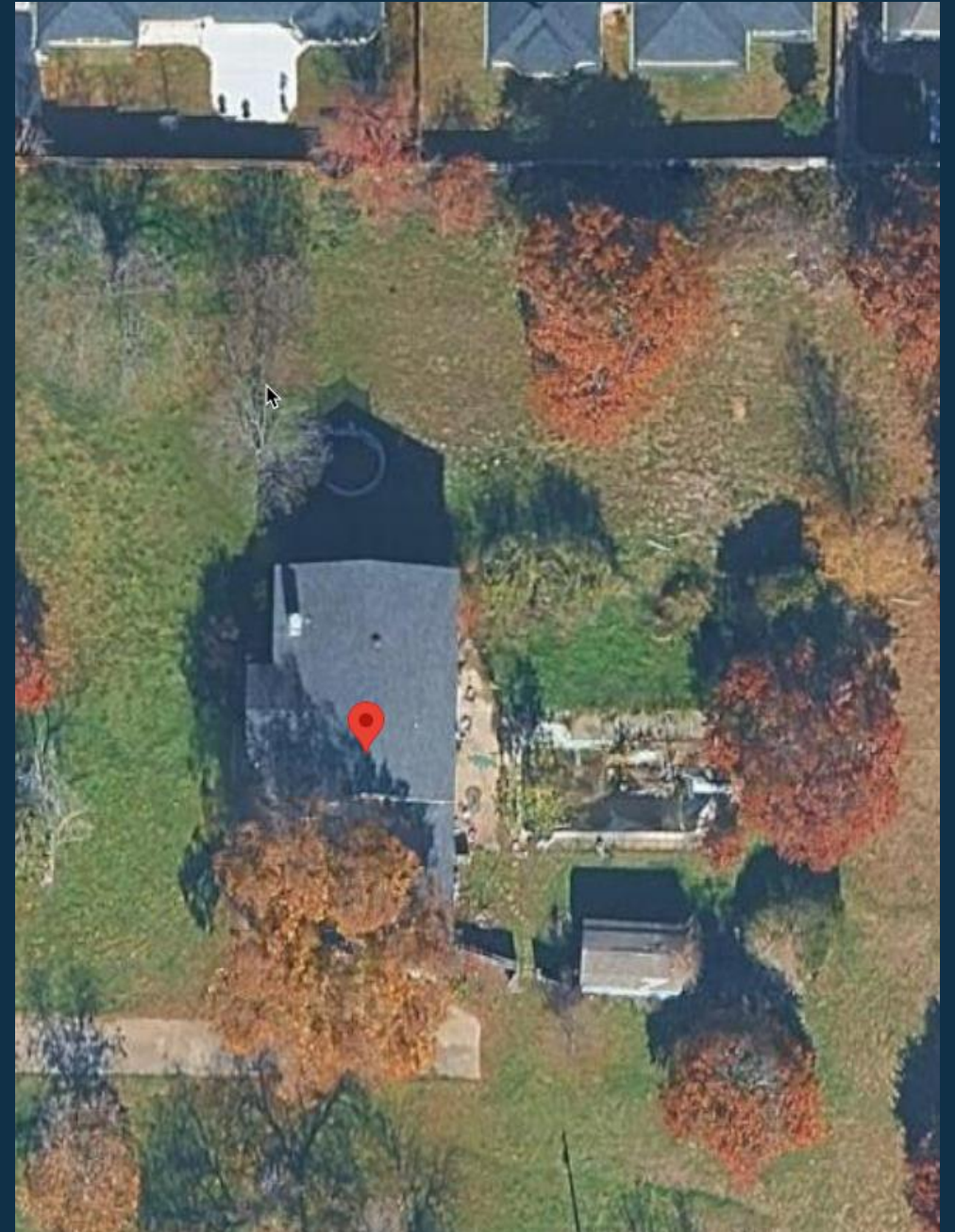
A resident-focused review of potential stormwater impacts from added roof area, hard surface, and changed grading.

Request: engineered drainage review before final approval



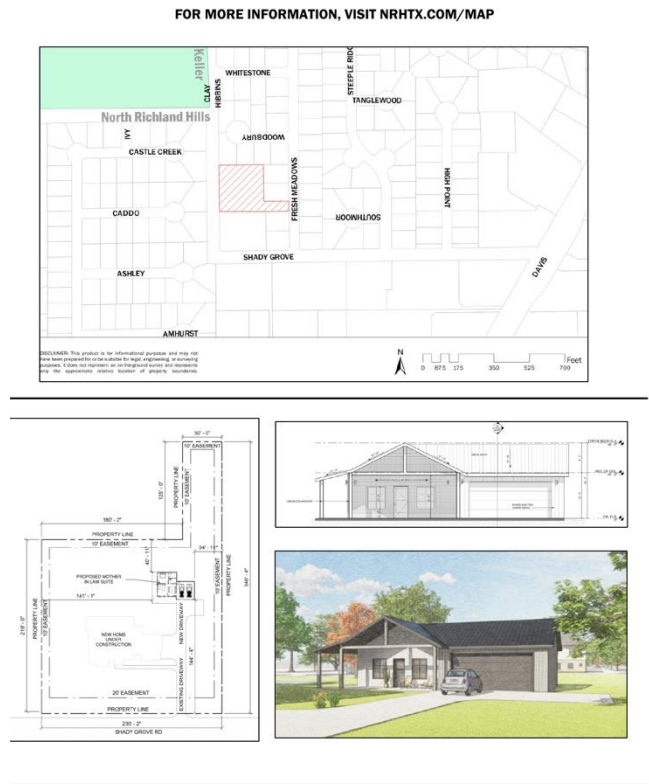
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Prepared for City staff, Planning & Zoning, City Council, and affected residents



What is being requested by the applicant

Case ZC26-0169: Special Use Permit for a secondary living unit / detached garage accessory structure.



Planning and Zoning Department | 4301 City Point Drive - NRH, TX 76180
817-427-6300 | www.nrhtx.com | planning@nrhtx.com

Key facts from the City notice

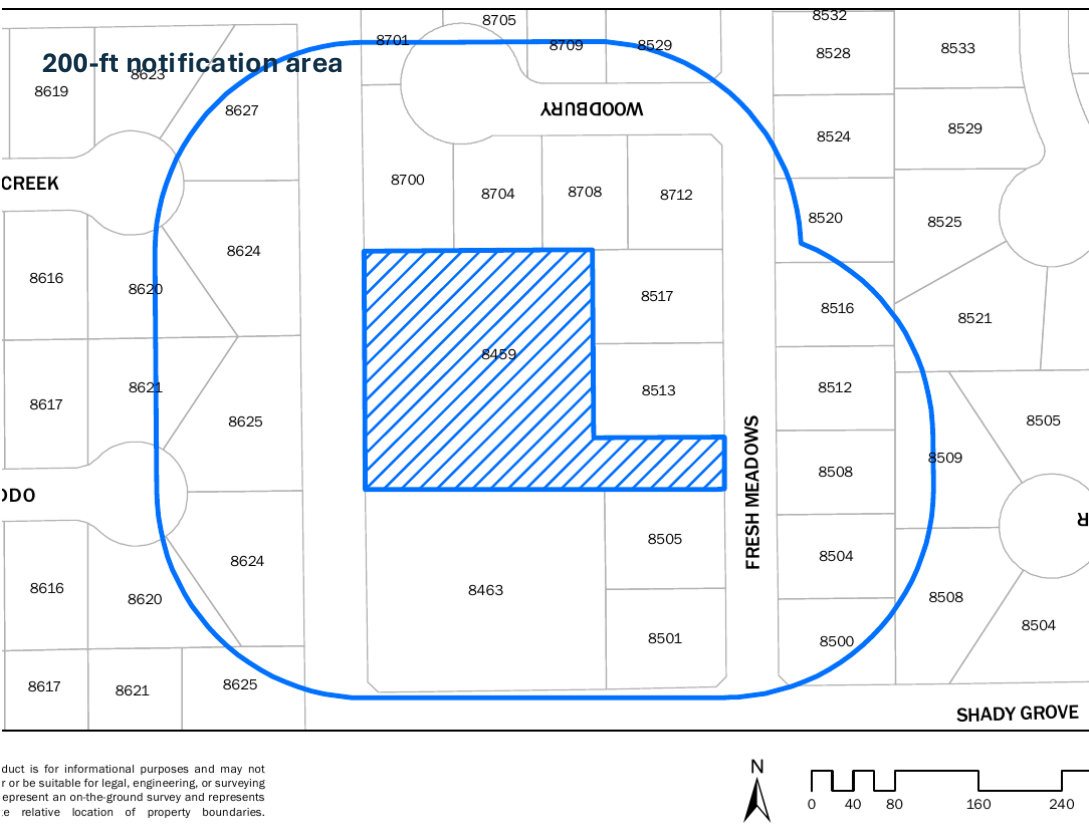
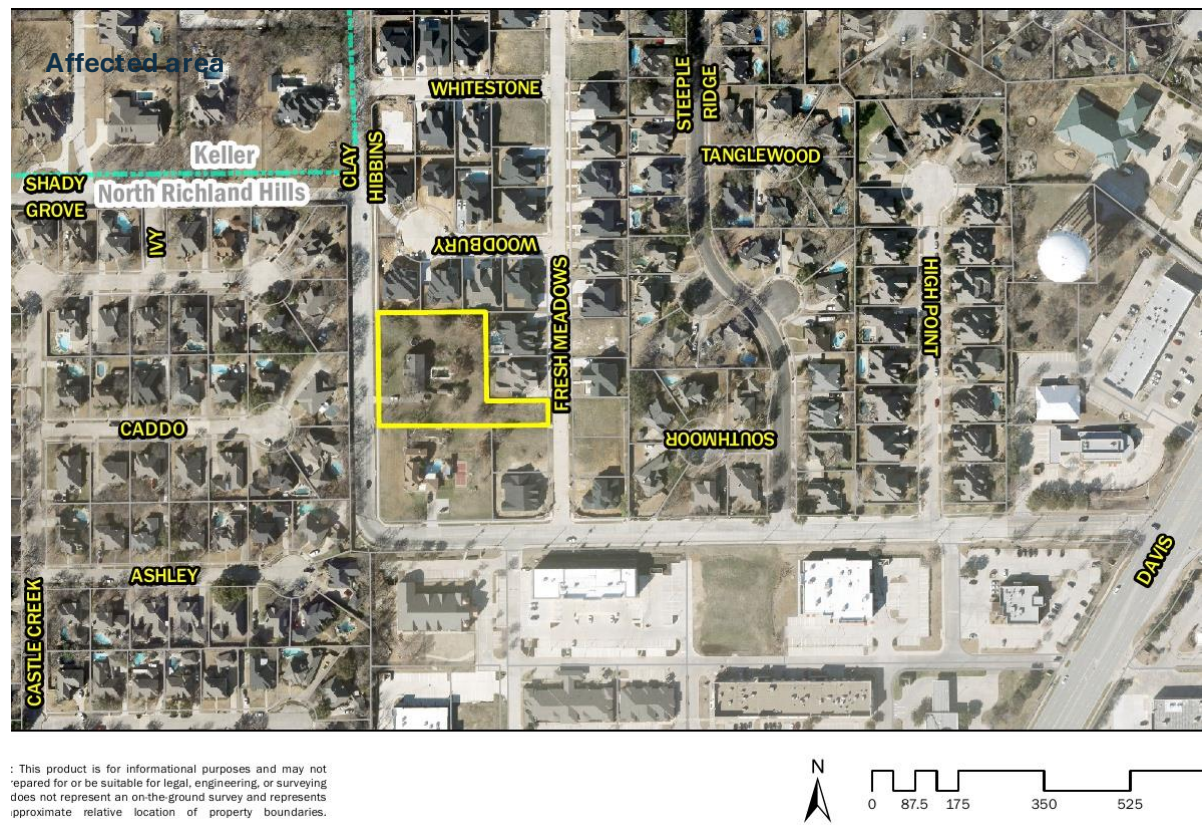
- Applicant: RAA Real Estate Investing LLC.
- Request: Special Use Permit for a secondary living unit.
- Accessory structure: 1,988 SF total; 798 SF living area; 477 SF covered porches; two-car garage.
- Property: 1.319 acres, Lot 1, Block 1, Merritt Addition.
- Public hearings: Planning & Zoning July 16, 2026; City Council August 10, 2026.

Core question:

Does the proposed work preserve the approved drainage pattern and prevent concentrated runoff toward neighboring lots?

The site is large, but drainage risk is local

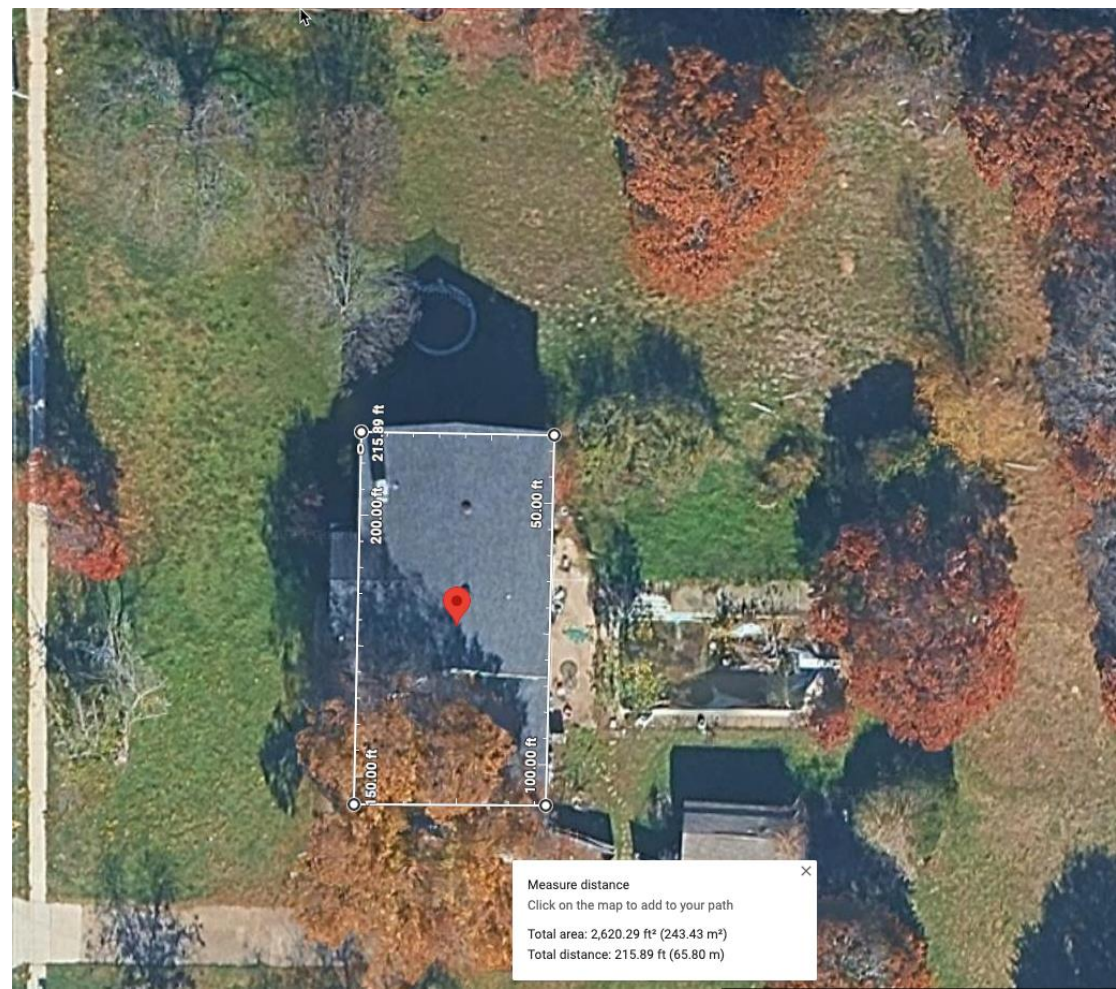
The concern is not just total acreage — it is where roof runoff, driveway runoff, and regraded surface flow are discharged.



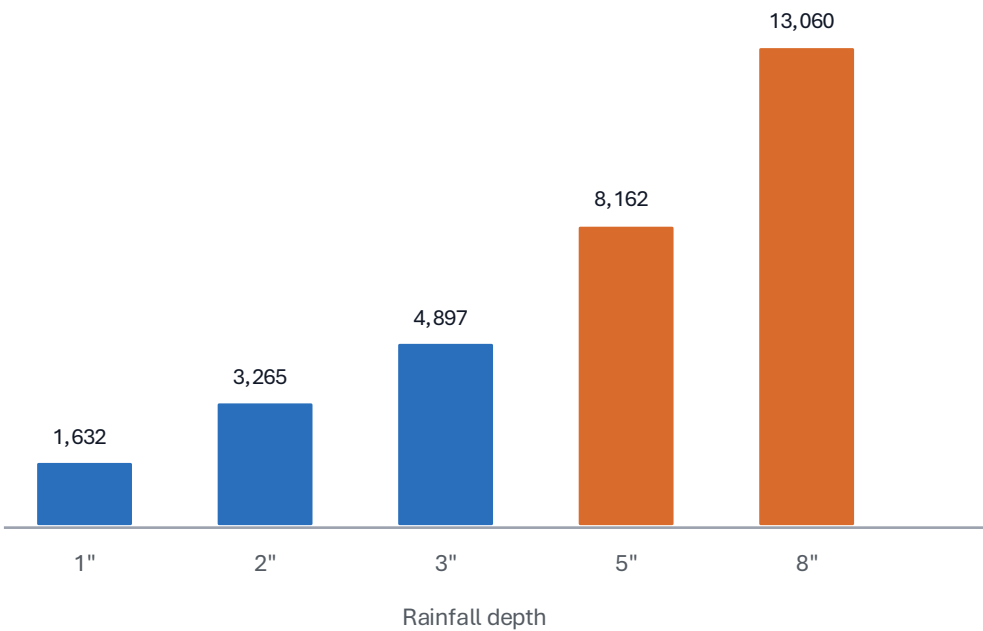
Potential downstream receptors include adjacent lots on Fresh Meadows / Woodbury and low points created by the construction grading.

Impervious roof area converts rainfall into rapid runoff

A roof does not absorb rainfall; discharge depends on downspout layout, grading, and whether runoff is detained or routed to an approved path.



Approximate roof runoff volume



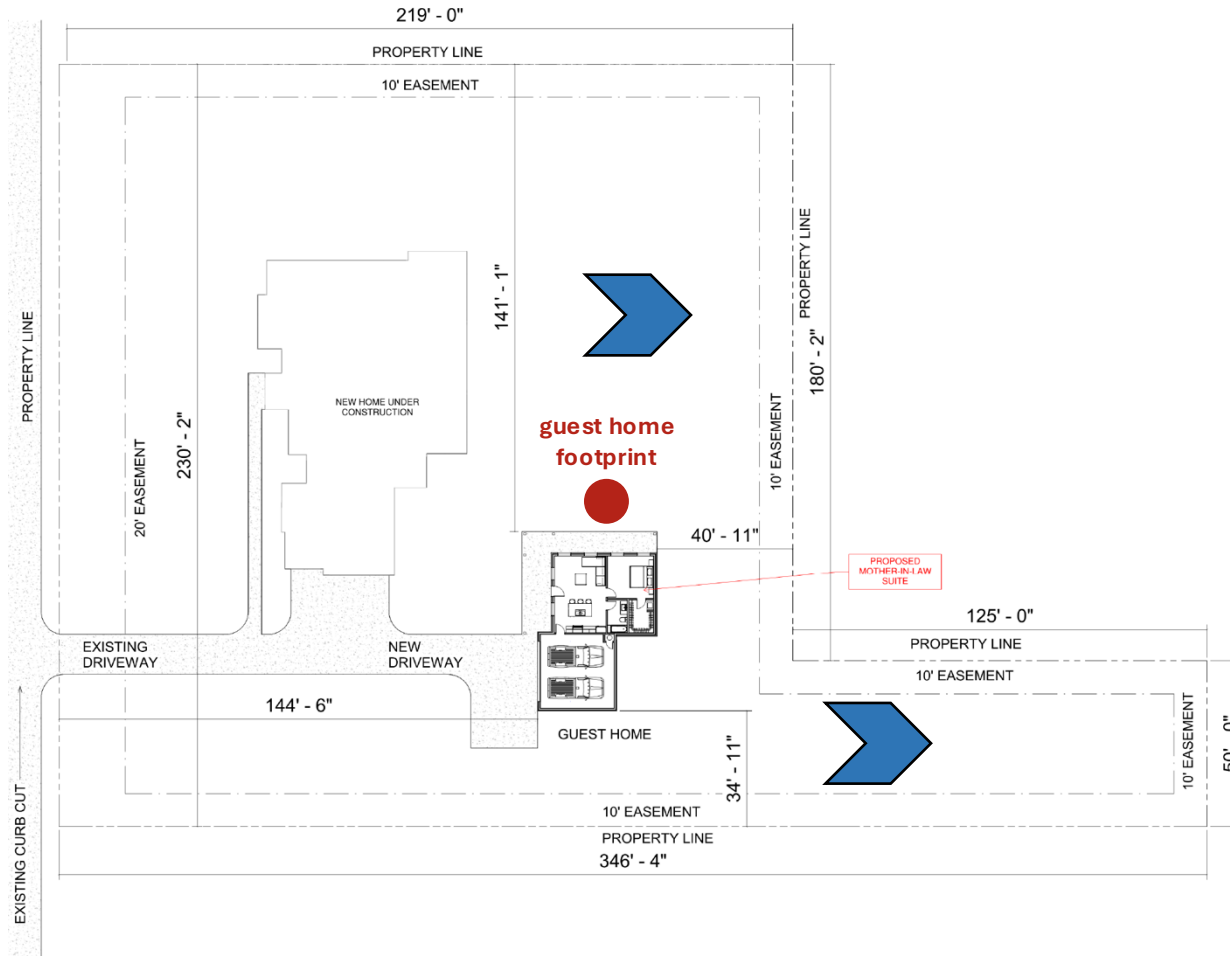
≈1,630 gal

per 1 inch of rainfall on the measured 2,620 SF roof area

Roof-only calculation. Total impervious impact increases if driveway, patios, walks, and compacted fill are included.

Site plan shows multiple runoff-generating changes

The accessory structure is paired with a new driveway and grading changes that need to be reviewed together.



01 SITE PLAN
SCALE: 1/8" = 1'-0"



NOTE: SURVEYOR WITH

Review items

- Pre-construction vs proposed topography and grade arrows.
- Downspout discharge locations and whether flow is concentrated.
- Driveway cross-slope and whether it directs runoff to the street or side yards.
- Any fill placed near property lines, easements, or neighboring low points.
- Whether runoff crosses more than two residential lots before reaching a street or drainage easement.[4]

The architectural site plan does not establish final grades or runoff routing. Residents request a separate grading/drainage review showing elevations, flow arrows, downspout discharge points, and runoff controls.[3][4][6]

Field photographs show extensive grading and exposed soil

These photographs document current conditions; they do not replace a licensed topographic survey.



Grade change 1 — raised building pad and exposed slope near the house.



Grade change 2 — broad disturbed area with fill and altered surface contours.



Grade change 3 — visible fall from the building pad toward the side/rear yard.

Observed condition: most vegetation has been removed over a large portion of the lot, reducing temporary soil protection and making runoff paths easier to form during storms.

Resident measurement indicates a substantial localized grade difference

The tape photographs show an approximate vertical difference at one field location; survey elevations are required for verification.



Grade change 4 — raised pad and fill adjacent to the new structure.



Grade change 5 — 26" of dirt added.



Grade change 6 — 34" of dirt added

City verification requested: compare approved grading elevations with an independent field survey and the final as-built grading & drainage survey required before final inspection.[5]

Observed runoff paths across disturbed ground

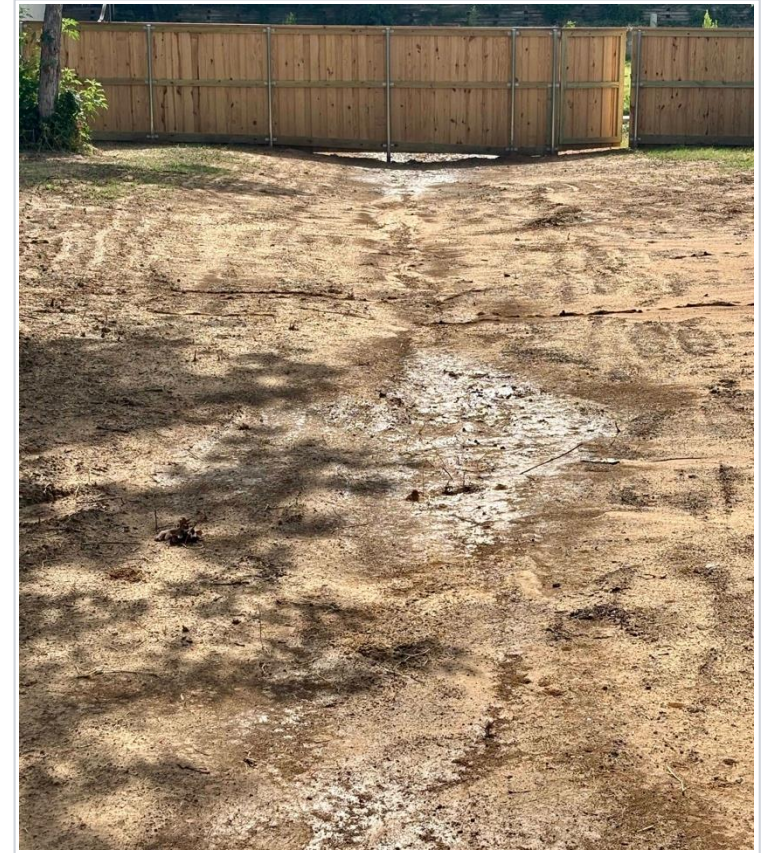
Resident photographs taken after wet conditions show visible flow concentration and erosion pathways.



Runoff 1 — broad disturbed surface and apparent channel through the yard.



Runoff 2 — wet flow path visible along compacted/exposed soil.



Runoff 3 — water appears to concentrate toward and beneath the fence line.

These images support a request to document pre- and post-construction flow direction, discharge locations, and erosion controls. The exact watershed and discharge route require professional survey/engineering confirmation.

Construction runoff and storm-drain inlet protection

The nearby curb inlet makes erosion and sediment controls a practical water-quality concern.



Runoff 4 — street-side fence and disturbed soil behind it.



Runoff 5 — low opening and wet/eroded path beneath the fence.

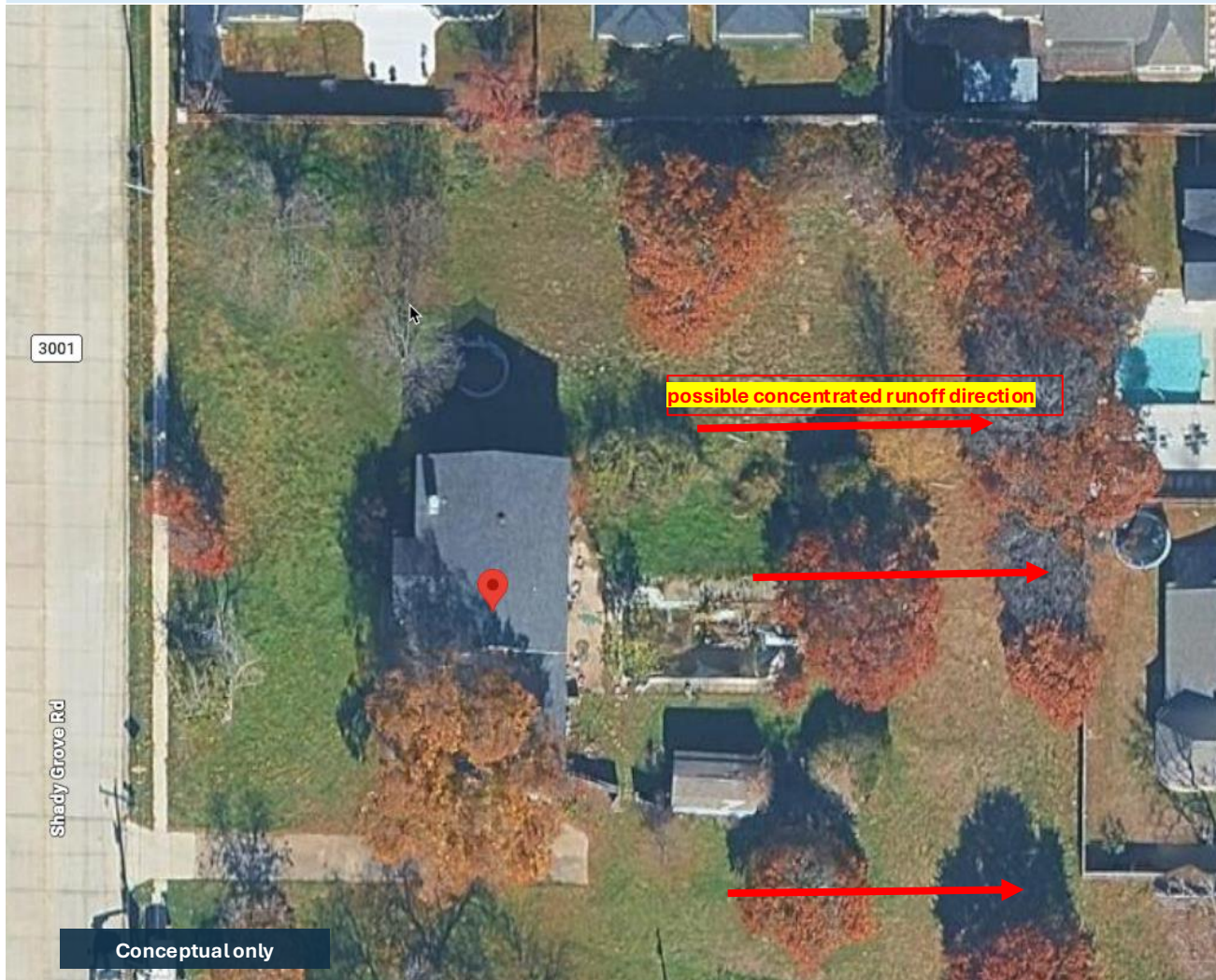


Runoff 6 — nearby curb inlet / municipal storm-drain entry.

Finding: If disturbance is at least 1 acre (or part of a larger common plan), NRH requires an approved stormwater plan and BMPs.[1] At applicable sites, the Code requires inlet/outfall protection and non-erosive conveyance.[6] The PWDM lists inlet protection, silt fence, construction entrances, and BMP maintenance.[3] TCEQ uses the same acreage threshold.[7]

Potential failure mode: concentrated flow to adjacent lots

The risk is magnified if regrading and roof leaders convert broad sheet flow into focused runoff.



What can go wrong

- Roof leaders discharge toward side or rear yards instead of an approved drainage path.
- Fill creates a berm that blocks historical flow from neighboring properties.
- Driveway pavement becomes a channel that bypasses soil absorption.
- Erosion/sediment reaches neighboring yards during construction before vegetation is restored.

Residents are asking for proof of flow direction and capacity, not assumptions.

What current City requirements say

Every legal statement below is tied to the numbered references at the end of the presentation.

Construction stormwater threshold [1]

Before construction disturbing at least 1 acre—or less than 1 acre as part of a larger common plan—the City Code requires an approved stormwater prevention plan. Applicable projects must use approved BMPs and maintain them.

Post-construction runoff review [6]

Applicable sites must follow the Public Works Design Manual or an engineer-designed plan approved by Public Works. The department may impose additional controls when hydrologic or topographic conditions warrant.

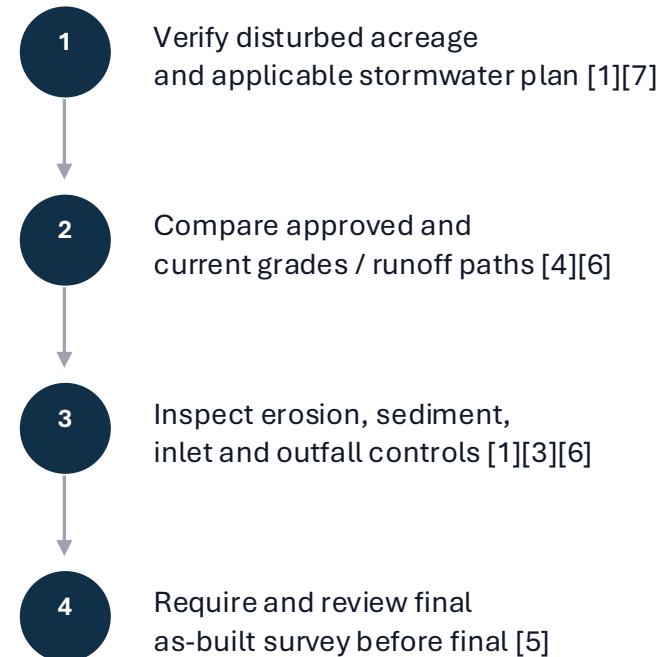
Residential grading / downstream impact [4]

The PWDM states residential lot grading should not route runoff across more than two lots before reaching a street or drainage easement, and downstream/adjacent effects must receive proper consideration.

Final as-built verification [5]

Current building-code amendments require a licensed-surveyor grading & drainage survey before final inspection approval for all new construction and other features that may affect City drainage designs.

Recommended verification sequence



The presentation does not determine whether a violation occurred. It asks the City to verify which requirements apply, inspect current controls, and document compliance.

Requests to the City

The requested conditions should be measurable and enforceable before final approval or occupancy.

1

Require an updated grading & drainage plan

Include existing/proposed contours, drainage arrows, fill areas, driveway grades, and discharge points.

2

Quantify added impervious surface

Roof, covered porches, garage, driveway, walkways, patios, and compacted construction access.

3

Route runoff to an approved path

Show downspout leaders, swales, drains, or detention so runoff is not concentrated on adjacent lots.

4

Confirm final as-built verification [5]

Enforce the current requirement for a licensed-surveyor grading & drainage survey before final inspection.

5

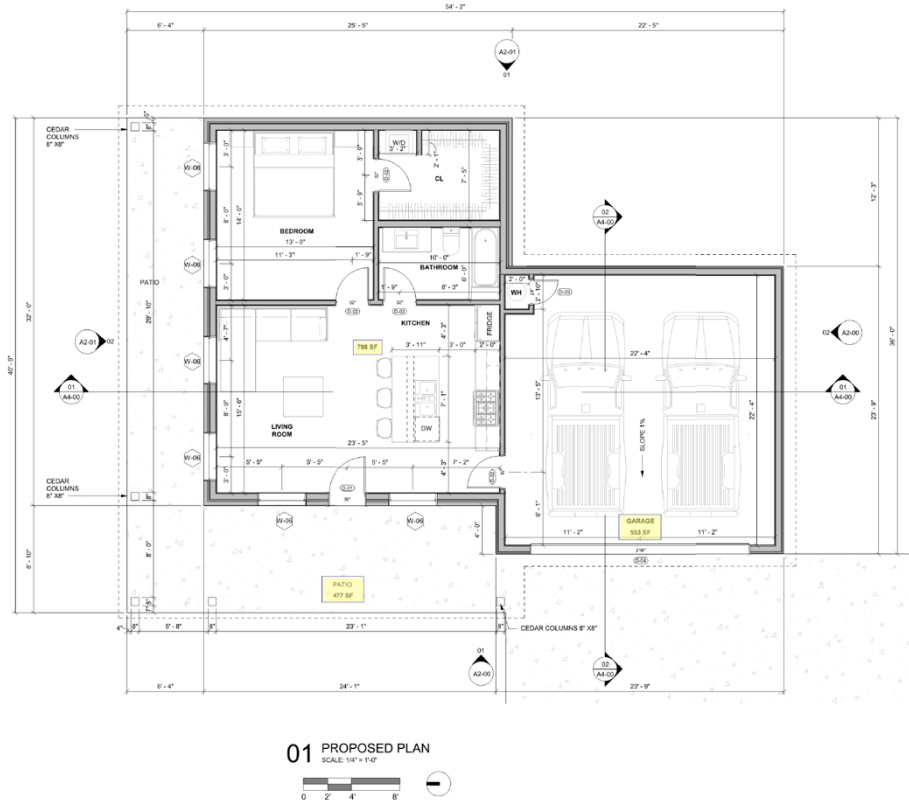
Inspect and maintain erosion controls [1][3][5]

Verify BMPs, inlet/outfall protection, stabilization, and corrective action while soil remains disturbed.

Resident position: approval should be conditioned on no adverse drainage impact to neighboring lots and field-verified compliance after construction.

Open questions for staff and applicant

These questions convert resident concern into reviewable technical items.



Questions to be Answered:

- What is the verified total disturbed acreage, and do NRH/TCEQ stormwater-plan requirements apply?[1][7]
- Has Public Works reviewed a grading/drainage plan for the structure, driveway, fill, and runoff routing?[4][6]
- What is the pre-construction drainage pattern, and what changes after construction?
- Where will each roof downspout discharge?
- Does the plan include detention, swales, area drains, or other conveyance features?
- How will the final as-built Grading & Drainage Survey required by the current building code be reviewed?[5]
- What erosion, sediment, inlet, and outfall controls are installed, inspected, and maintained?[1][3][6]

A complete answer should identify flow direction, elevation control, capacity, and maintenance responsibility.

Closing message

Residents support a clear, enforceable drainage review before the project moves forward.

Requested Action

Before approval: require a documented drainage solution that prevents concentrated runoff, preserves approved grading intent, and is verified by an as-built survey.

Numbered references — City ordinances and design requirements

Bracketed numbers throughout the deck refer to these sources. Accessed July 14, 2026.

- [1]** NRH Code of Ordinances, Chapter 102, Article VII, §§102-353–356 — stormwater plan threshold, BMP implementation/approval, and maintenance.
- [2]** NRH Code of Ordinances, Chapter 102, Article VII, §§102-357–359 — notices of violation, stop-work authority, and penalties.
- [3]** NRH Public Works Design Manual — erosion-control plans; construction entrance, silt fence and storm-drain inlet protection; SWP3 implementation and BMP maintenance.
- [4]** NRH Public Works Design Manual — residential lot grading, off-site/adjacent drainage impacts, single-lot grading permits, and revised grading plans.
- [5]** NRH Ordinance No. 3947 (2026 building-code amendments), §107.6 Final as-built grading surveys; R108.7 item 7 regarding failure to maintain erosion control.
- [6]** NRH Code of Ordinances, Chapter 102, Article VIII, §§102-371–378 — applicability, permits, design criteria, additional runoff controls, and inlet/outfall protection.

Primary online sources

ecode360.com/46059211 | ecode360.com/46059296 | ecode360.com/46068975 | nrhtx.com/DocumentCenter/View/21964

Numbered references — State permit, case documents, and photographs

Supporting material used for calculations, exhibits, and field observations.

- [7]** Texas Commission on Environmental Quality, Construction General Permit TXR150000 and current construction-stormwater guidance — coverage and SWP3 requirements for disturbances of at least 1 acre or qualifying common plans.
- [8]** City of North Richland Hills case materials supplied for ZC26-0169: Property Owner Notification, Location Maps, and Site Plan Exhibits.
- [9]** Resident aerial screenshots, roof-area measurement, and field photographs labeled “grade changes 1–6” and “runoff 1–6,” supplied July 2026.
- [10]** Rainfall-volume conversion used on Slide 4: 1 inch of rain over 1 square foot equals approximately 0.623 gallons.

State source tceq.texas.gov/permitting/stormwater/construction

Important applicability note: the parcel area is 1.319 acres, but the City/TCEQ stormwater-plan threshold is based on the area actually disturbed (or a larger common plan), which must be verified by staff or the operator.[1][7]