Boulder QE Setting Guidelines

Purpose of a QE

Keep in mind the purposes of QEs when setting for an event. Much of the discussion below is intended to steer setters towards setting for these events. Strictly speaking, the purpose of a QE is to differentiate competitors for Regional qualification. Ideally, we want the "best" (or "best performing") competitors to qualify for Regionals. Beyond qualification for Regionals, there are other secondary purposes for having QEs, some of which include:

- QEs should prepare competitors for the style of climbing they will see at Championship Events.
- QEs should be accessible to novice competitors yet provide challenge for elite competitors.
- QEs should be fun! Sure, not everyone will always have their best / most fun day, but we want to make sure that most competitors have a great time when they attend QEs.

NEW for the '24-'25 season

An L2 waiver is no longer required for QEs this season, although it is recommended that an L2 or greater acts as head setter. If an L2 or greater is not available, the head setter should review the QE setting guidelines. As a reminder, all members of the routesetting team are required to have routesetter memberships.

Prior to beginning routesetting

Confer with the RC team and decide on Category Stacks/climbing sessions for each stacking. Some factors affecting category stacks will be:

- Number of athletes per category signed up
    - If there are more than 50 per stack, it is recommended to break that stack into different sessions
    - Ex: U13-M (Male) + U13-F (Female) = 72 climbers total, recommend placing them in different sessions during the comp day.
- Size of gym/area dedicated to the competition
    - All routes in any given session must be independent and able to be climbed simultaneously.

For Youth and Collegiate QEs, boulders can be "shared" and/or Categories can be "stacked" to optimize the number of boulders required. The Format options:

1. Modified Redpoint: 6-10 boulders per category

2. Isolation: 4 boulders per category
3. Rotation Redpoint: a combined total of 4-10 boulders per category split among 1-2 courses
4. Classic Redpoint **(NEW)**: A minimum of (40) boulders in total are set.

For Modified Redpoint, Isolation or Flash Formats, routes can be “shared” and/or categories can be “stacked” to optimize the number of routes at Youth and Collegiate QEs. For Classic Redpoint, all routes are shared between categories.

The Host Facility, according to the QE host agreement and Rulebook, must provide the following:

- Routesetting schedule to be determined by the Head Routesetter in conjunction with Host Facility.
- An experienced maintenance team available throughout each round of competition in order to perform maintenance or repairs
- A minimum of 3 meters of sideways length for each route lane
- Three (3) assistant routesetters for the duration of routesetting (at least one capable of setting quality V10’s and 5.13’s)
- At least two forerunners the day before the event (at least one capable of climbing 5.13). These two forerunners are in addition to the routesetters the Host Facility provides.
- Five (5) full days shall be allocated for the competition’s routesetting
- Host Facility is responsible for stripping all necessary walls of holds and cleaning them prior to the first scheduled routesetting day. These holds are to be made available to the routesetters and they must provide unimpeded access to the competition areas during the routesetting dates.
- Host Facility will allow shared use of its routesetting tools and supplies for the duration of routesetting (ladders, power tools, hardware, etc.)
- Alterations to the climbing wall (including but not limited to holds, volumes, placards, set screws, etc.) used during the competition may, at the sole and exclusive discretion of Host Facility, remain at the conclusion of competition, and any such alterations are the responsibility of Host Facility to leave or remove for Host Facility’s normal business operations. USA Climbing will have no responsibility for alterations to the climbing wall after the conclusion of the final round of competition.
- Forerunners:
    - If used, they must be verified they are not associated with any athletes as a coach, teammate or having any contact with any competitors prior to the start of the competition.

- All forerunners are considered part of the Routesetting team (regardless of age).
- See Rulebook sec 3.13, 3.15.5, 3.13.5(a)(d); 3.13.6 for details.
- All forerunners should have an USAC Routesetter membership (regardless of age).
- See the YOUTH FORERUNNER Policy below

Competitor Considerations

- For each category you will want to consider:
  - Height
  - Reach
  - Experience
    - Regarding experience: It's important that competitors have some level of success. Approaching the QE by setting for the top 25% of the field is an issue. It would be better overall to have ties in the top 5, and not in the 10-15th places and allow for all competitors to gain some zones.
    - Note to above: We still encourage setting for the goal of no ties, but accommodating the low end of the field can result in ties in the top end and USA Climbing accepts that as a result.

Refer to the following table when setting. The average height and reach ranges represent approximately 95% of youth competitors. There may be exceptions on either side of the data range. Please work with your Regional Coordinators to identify those exceptions[1] and average climbing grades specific to your region.

NEW - Age Categories: The International Federation of Sport Climbing (IFSC) member federations voted to approve a shift in IFSC age categories starting in 2025. Please read the email sent August 2024 to USAC membership.

[1] The ranges presented are based on approximately 1000 actual USAC youth competitor responses to height/reach survey data collected from 2022-2024 using former category designations of JR, A, B, C, D. Age ranges have been included to indicate shifts in new category designations for the 2024-2025 season (U13, U15, U17, U19, U20).

Category	Ages	Avg Height & Reach		Grade Range	
		Height (in.)	**Reach***(in.)	**Boulder**	**Lead/Top Rope**
U13-F	11 or younger	47-60"	58-75"	V1 - V6	5.8/10 - 5.12/13
	12 yr olds	52-66"	65-84"	V2 - V6	5.8/10 - 5.12/13
U13-M	11 or younger	47-60"	59-76"	V1 - V6	5.8/10 - 5.12/13a
	12 yr olds	52-65"	63-84"	V2 - V6	5.9/10 - 5.12/13a
U15-F	13 yr olds	52-66"	65-84"	V2/3 - V7/9	5.9/10 - 5.13/13bc
	14 yr olds	56-68"	70-86"	V2/3 - V7/9	5.9/10 - 5.13/13bc
U15-M	13 yr olds	52-65"	63-84"	V2 - V7/9	5.9/10 - 5.13a/13bc
	14 yr olds	56-72"	70-92"	V3 - V7/9	5.9/10 - 5.13a/13bc
U17-F	15 yr olds	56-68"	70-86"	V3/4 - V8/9	5.10/10a - 5.13a/13bc
	16 yr olds	58-69"	72-88"	V3/4 -V8/9	5.10/10a - 5.13bc
U17-M	15 yr olds	56-72"	70-92"	V3/4 - V8/10	5.10/11 - 5.13bc
	16 yr olds	60-74"	75-96"	V3/4 - V8/10	5.10/11 - 5.13bc
U19-F	17 yr olds	58-69"	72-88"	V3/4 - V9/10	5.10a/11 - 5.13a/13bc
	18 yr olds	57-70"	68-92"	V3/4 - V9/10	5.10a/11 - 5.13a/13bc
U19-M	17 yr olds	60-74"	75-96"	V4 - V9/10	5.10a/11 - 5.13bc
	18 yr olds	60-76"	76-99"	V4 - V9/10	5.10a/11 - 5.13bc
U20-F	19 yr old	57-70"	68-92"	V3/4 - V8/10	5.10a/11 - 5.13a/13bc
U20-M	19 yr old	60-76"	76-99"	V4 - V9/10	5.10a/11 - 5.13bc

The ranges presented are based on approximately 1000 actual USAC youth competitor responses to height/reach survey data collected from 2022-2024 using former category designations of JR, A, B, C, D. Age ranges have been included to indicate shifts in new category designations for the 2024-2025 season (U13, U15, U17, U19, U20).

*Toe to hand

- Set at least one boulder or route that will challenge National-level competitors. National-level competitors won't have any trouble qualifying for Regionals, but they are traveling / paying to attend QEs too. Having an appropriately challenging boulder / route helps them to have more fun and get more value out of the QE. These competitors typically need practice onsighting / flashing than they do with projecting. An easy way to challenge National-level competitors is to add moves that require good timing, precision, coordination, or complex movement, rather than using traditionally "hard" rock climbing moves. This approach allows climbers of all abilities to learn, with the expectation that it will probably take non-National level competitors many more attempts to succeed.
- Set at least one boulder (and part of a route) that will be accessible to novice climbers. The focus for every QE routesetting crew should be on the low and middle ends of the field where it is most competitive. That said, there should be a climb that everyone

could top. Low zones can really help novice climbers have fun on routes that are otherwise too difficult.

- Set most boulders / routes to target separating the bulk of the competitors that fall into the average skill level. The above two points are intended to ensure that the most skilled and least skilled competitors aren't left out of the QE experience. That said, most boulders / routes are really for competitors in the fat part of the bell curve.
- Set boulders / routes on a variety of terrain. Don't just set "hard" problems on overhang, and "easy" problems on vertical terrain. Give each category climbs on each kind of terrain that your gym provides.

Format Rules

Modified Redpoint

This is the most common competition format for Boulder and Lead/TR QEs.

- Athletes climb a specific set of 6 to10 boulders (5-20 attempts) for their age/gender category during a minimum 3-hour time block.
- Individual boulders/routes may be assigned to multiple categories.
- Boulders are set and scored with Tops, Zones, and (if desired) Low Zones.

Isolation

- 4 boulders per category
- Competitors are allocated a 4-minute climbing period per boulder with 4 minutes of rest before climbing the next boulder.
- Competitors are escorted from Iso and climb their routes in sequence

Rotation Redpoint

This format is used at Youth Nationals Boulder Qualification round.

- Provides each category with a combined total of 4-10 boulders split among 1-2 courses.
- Competitors are allocated a 4-minute climbing period per boulder with 4 minutes of rest before climbing the next boulder on each course (similar to Boulder Isolation format)
- Demonstration videos are required (similar to Lead/TR's Flash format).
- Athletes may observe the attempts of other climbers, and may receive beta from coaches, fellow athletes, and spectators prior to and between their attempts (but not while climbing)

Classic Redpoint

- A minimum of forty (40) boulders in total should be set, though this minimum may be waived by Sport Discretion (Rule 1.9.2) based on a timely request of the Event Organizer.

- Competitors have the goal of completing the highest value boulders, where each boulder has a unique value.
- Each boulder will be worth a specific number of points based on that boulder's anticipated rating/difficulty. See Table 8-3 in Rulebook section 8.10.2 (d) for the points value chart.
- There are no Zones; only 0 for attempts and a points value for Tops
- A competitor's final score is based on their top 5 completed boulders.

Modified Redpoint

Commonly used stacks or sessions

- Example 1: 8 boulders per category stack, total of 40 boulders. This could be 6 boulders or 10 boulders for totals of 30 and 50 respectively.
  - Session 1: U13-F, U15-F, U17-F, U19-F, U19-M
  - Session 2: U13-M, U15-M, U17-M, U20-F, U20-M
  - In this example, the U19 and U20 categories will climb the same boulders (U19-M and U20-M/U19-F and U20-F) so they need to be in separate "heats"
  - In general, these stacks would be all crossed over for gender (U13-F to U13-M) and may only require a difficulty tweak, but not absolutely) other than U19-M/U20-M and U19-F/U20-F that would share the same set of boulders for each stack, therefore putting them in different heats.
- Example 2: 8 boulders per category stack, for a total of 32 boulders. This option requires more tweaking between heats and is more complicated from a routesetting sense but COULD be advantageous as you can watch and assess difficulty more during Session 1 and make intelligent planned tweaks if needed between heats.
  - Session 1: U13-F, U15-F, U15-M, U17-F, U17-M
  - Session 2: U13-M, U19-F, U20-F, U19-M, U20-M
  - In this example, it is more complicated with more tweaking required between heats.
  - U13-F tweak to U13-M; 8 boulders
  - U13-F/U13-M stacked in the same heat (numbers of athletes permitting); 8 boulders
  - U17-F tweak to U19-F/U20-F; 8 boulders
  - U17-M tweak to U19-M/U20-M/ 8 boulders

Zone-only (1 Zone) vs LowZone + Zone (2 Zone) Boulders

- The rules allow for a boulder to have only a Zone (1 Zone), or to have both a LowZone and a Zone (2 Zones), in any category for the QE
- If using a LowZone:

    - Moves between the start and LowZone must be equitable in difficulty across all boulders that have LowZones
    - Moves between the LowZone and Zone must be equitable across all boulders in the category/round
    - If a boulder in a category/round has a single Zone, the moves to that single Zone must be equitable to moves on others boulders in the category/round from the LowZone to the Zone
    - Making these sections as equal as possible is important for separation, and not skewing the "value" of a boulder with a single Zone.
- In general, if a mixture of 1 and 2 Zone boulders is to be used, an equal number of each is best, and if that is not possible (some boulders don't have a place to logically place a LowZone) skewed towards less 2 Zone boulders will help combat the instance where an athlete earns 5 LowZones and is beaten by an athlete earning only 1 Zone.
- The LowZone is weighted as less valuable in the scoring system than a Zone.
- At QEs, there should be some boulders with 2 Zones for all categories.
    - A goal of the QE is indeed to create separation and rank, but also to be inclusive for all climbers. This could be the first in-person competition for many climbers. The goal isn't to make sure every competitor gets a top, but everyone should be able to at least start almost all the boulders, hopefully even have something on their score card (LowZone/Zone).

Modified Redpoint - Starts, Finishes, and Marking

- Zones/LowZones
    - ZONE or LOWZONE placard with 1 flash of tape as noted below.
    - Instead of marking a difficult to Control (difficult to judge) hold as a Zone/LowZone, consider marking the next hold as the Zone/LowZone.
        - The Zone/LowZone holds do not need to be a crux.
        - If a crux is a move that is difficult to control but the next move is easy to control, it is often better to designate the next hold to be the Zone/LowZone.
            - This next involves an added hold, but this added hold should be necessary to avoid someone skipping it and not being awarded the Zone/LowZone.
- This clarity in judging results in high consistency of judging.
- Zones/LowZones/Finish is any base object marked with a flash of tape as well as all objects attached to that base object.
- Zone/Lowzone use color of tape *that is different than used for Starts and Tops*

    - Recommendation: all boulders (at least all boulders in a Category) use same color for Zone & LowZone

For All Formats: Starts, Finishes, and Marking

- Starts
    - Regardless of format, every boulder must have a 4-Point start, with START placard and 4 flashes of tape as noted below. Per Rulebook 8.13.3.
    - Competitors **cannot** touch/use any non-start hold or structure/volume in order to establish the start.
        - Competitors **are** allowed to touch/use the wall to establish the start
    - Be careful marking the start as the particular holds on a volume. If the volume is not marked as the start, touching/using the volume (e.g. with finger tips, heel of the palm) is not allowed.
- A Finish is any base object marked with a flash of tape as well as all objects attached to that base object.
    - Objects that are “touching” are *NOT* a single hold. (See “Myths” section below)
- Finish/Top
    - TOP placard with 1 flash of tape as noted below.
    - A single hold or a single volume (maybe with additional objects mounted on it).
        - not a box around an area of the wall.
    - Avoid top-out finishes (they are allowed, but should be avoided)
- Tape flash / placard guidelines
    - Make sure flashes of tape are clear, and do not interfere with the climbing process
        - E.g. make sure tape isn’t where a competitor may put their hand or foot.
    - Have one flash of tape connect the placard with the hold/structure.
        - E.g. use flash to connect single START placard with one of the start holds
    - Starts and Tops use same color of tape
        - Recommendation: all boulders (at least all boulders in a Category) use the same color for Start and Top.
- Labeling Climbs
    - Each climb needs a unique number
    - For Modified Redpoint format, number climbs sequentially based on floor layout (e.g. clockwise from one boulder to the next, around the bouldering area) – do not number them by the easiest to hardest.

    - For Classic Redpoint format, boulder difficulty is matched to the number of the boulder (e.g., 1=100pts, 2=200pts, etc.) and thus it is not possible to number boulders sequentially (e.g., clockwise from one boulder to next, around bouldering area) without creating a lot of confusion or inefficiency within the competition. The recommended setting approach is as follows:
        - Determine the quantity of boulders, general level of difficulty for those boulders and the location of each of those boulders.
        - As forerunning commences, begin assigning a "number" to the boulder which directly correlates to the difficulty (1=100pts, 2=200pts, etc.) with 1 being the easiest and 40 the hardest. Note: there is no option for intermediate steps of points (e.g., 1.5=150pts).
        - Once all forerunning and boulder number assignments have concluded, place the USAC boulder placards on the wall that correlate with the boulder number.
        - For the competition, it is very important to create a boulder map to provide to competitors and coaches a way to identify where the boulders are located in the facility. The boulder map should include boulder numbers, the zone/area the specific boulders are set within and the color of said boulder.
        - Please see this Example Boulder Map to use. Make a copy, download and edit for use at your event.
- Labeling Lanes
    - It is suggested to use a placard at the top of the wall centered in a series of lanes to mark "Lane 1", "Lane 2", …
- U13/U15 height
    - No Downward Jumps
    - 8-12 handholds
    - "8' Rule" - (Rulebook 8.2) The lowest part of the body shall never be higher than two-and-a-half (2.5) meters (approx. eight (8) feet) above the safety matting.
        - This height limitation shall not apply to Classic Redpoint Format competitions, though the height limitation should be considered for boulders that a U15 or U13 Category competitor may attempt at a Classic Redpoint Format competition.

Other Considerations (Red/Black Tape, Structures/Volumes, Flow, Interference)

- Red/black tape

    - Red tape: The climber can smear, toe hook arete, heel hook arete, etc. past the tape but cannot use any Artificial Holds and Structures (typical use: red box around down-climb jugs).
    - Black tape: The climber cannot touch any part of the wall or any Artificial Holds and Structures past the tape. Past the tape is 100% out of bounds.
    - Minimize the use of tape. It should be primarily used for safety.
    - No use of red or black tape for any other purpose.
- Keep things simple for competitors
    - Have a simple rule for volumes:
        - All volumes/structure on
        - Volumes only on if have hold of matching color
    - Set monochromatic routes, unless for Isolation. If not monochrome, this needs to be communicated to athletes in the rules meeting
- Flow
    - Spread out the location of boulders for each category. Consider wall space and the number of available lanes.
    - Please make a best effort to avoid setting more than one boulder per lane.
        - End of session attempts may occur, creating long lines in lanes.
        - Make your best effort to avoid setting boulders for overlapping categories when using one boulder for multiple categories in a session
    - Consider making a map of the gym and where the boulders are located
- Warm up space
    - Take into account the number of competitors moving through the facility and allocate an area where they can warm up appropriately.
- Make sure climbing two boulders simultaneously does not cause interference, unless they are in different sessions.
- Eliminated boulders
    - JP can eliminate a boulder (e.g. doesn't adhere to the rules)
- Myths vs. Facts
    - *MYTH:* "A volume is an extension of the wall."
    - *FACT:* The rules treat the climbing surface (wall) very differently than a structure (volume).
    - *MYTH:* "Two holds touching are considered the same (a single) hold."
    - *FACT:* The only time two objects are related are when one object (e.g. a hold) is mounted onto another object (e.g. a structure/volume). The rule regarding

touching a start-blocker hold does NOT imply that the start-blocker hold is a starting hold.

- **Other considerations for event officials**
    - Be mindful of volunteer availability.
        - Many regions struggle with volunteer recruitment. This discipline requires judges and many are new parents.
        - This information is shared so that you have insight to the challenges event officials are facing and to help you as you engage in competition discussions with the JP, Event Organizer and RCs. These are not your variables to control.

Color blind & visually impaired (legally blind) competitors

(Please see expanded Color Blind & Visual Impairment Setting Guidance)

Due to the multiple colorblind conditions that exist, it is near impossible to isolate all the color conflicts for each competitor. Event Officials (JP, USAC Judge, RCs, etc.) will work with the facility and routesetters in a best effort to make these accommodations. Please see the guidance below to assist your setting goals for an event. The setting team is encouraged to make best efforts to:

- Due to the nature of how this accommodation affects setting in the field-of-play for all competitors, only the category of the competitor may be shared with event officials, including head setter. The name of the individual *may not be shared* so as not to create bias.
- For QEs it may be necessary to set more than one boulder or route per lane.
    - When there is overlap, tape with the word “CLIMB” written on it can be added to differentiate the problems.
- For competitions where boulders/routes are separate and non-conflicting/overlapping with each other, it's less likely that tape will be used and as such in these cases we recommend that the setting team makes best efforts at avoiding setting with color holds that are the same color as the wall and use high-contrast colors between holds and the wall.
- For the upper-level championship events, boulders and routes are normally set monochromatically with each boulder or route independent of each other; in their own lane with no overlap.
    - Using tape with the word “CLIMB” could be allowed for championship events only if it doesn’t compromise the event and the Jury President and Head Setter approve.
    - If this approach is utilized, an example of the demarcation must be illustrated in the isolation area for all competitors to see.

- When possible and appropriate, routesetters will include additional downclimb holds to accommodate for a TBI (traumatic brain injury).

USAC Youth Forerunner Policy:

- All forerunners are considered part of the Routesetting team (regardless of age).
- All forerunners should have an USAC Routesetter membership (regardless of age).
- See Rulebook sec 3.13, 3.13.5; 3.13.6 for details.
- **Youth/Competitor Forerunners (17 yr or under):**
    1. Like adult forerunners, youth forerunners must sign up for a Non-Certified Routesetter membership and sign the Routesetter Code of Conduct
        a. Youth who are under 17 yrs old will not be able to complete Safe Sport and the Routesetter membership will stay in an "action-required" state, which is ok.
        b. The important element is that they sign the Routesetter Code of Conduct and adhere to it ensuring competition integrity.
    2. In-region/division athletes may not be used for events within their region/division regardless of their lack of participation in the competition.
    3. All interactions with the youth must be observable and interruptible per MAAPP & Safe Sport Policies.
    4. Parents must provide, in writing, consent for the youth to participate as a forerunner to the following individuals:
        a. Head Setter for the event
        b. Event Officials – Event Organizer/JP
        c. CC: athletesafety@usaclimbing.org

Scoring Module - See "Setter Instructions"

The week prior to the event, the scorekeeper should send you a "Setter Link"

- Setter's Link Instructions
- Boulder QE MR Checklist
- Boulder QE Isolation Checklist
- Boulder QE Rotation Redpoint Checklist
- Boulder QE CRP Checklist
- Join the Routesetter WhatsApp Chat for scoring support.
- Contact scoring@usaclimbing.org with questions.

Reference documents

- USAC Rulebook
- USAC Judging Videos (Start, Control, Scoring)

- Boulder QE MR Judge Summary Guidance
- Boulder QE Isolation Summary Guidance
- Boulder QE Rotation Redpoint Summary Guidance
- Boulder QE Classic Redpoint Judge Summary Guidance
- QE Host Agreement
- USAC Youth Resources - Placards